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SUPPLEMENT

TO THE

THIRTY-FIFTH ANNUAL REPORT

OF THE

REGISTRAR-GENERAL

OF

BIRTHS, DEATHS, AND MARRIAGES

IN ENGLAND.

Presented to both Houses of Parliament by Command of Her Majesty.

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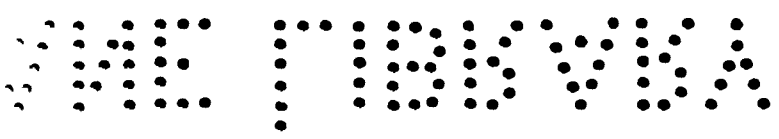

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LETTER

TO

The REGISTRAR-GENERAL on the MORTALITY in the REGISTRATION DISTRICTS of ENGLAND during the YEARS 1861–70; by WILLIAM FARR, Esq., M.D., F.R.S., D.C.L.

General Register Office, Somerset House,
5th February 1875.

SIR,

How the people of England live is one of the most important questions that can be considered; and how—of what causes, and at what ages—they die is scarcely of less account; for it is the complement of the primary question teaching men how to live a longer, healthier, and happier life. Armed with this golden bough, we may enter the gloomy kingdom of the dead, whither have gone in twenty years nine thousand thousand English children, fathers, mothers, sisters, brothers, daughters, sons:

> Matres atque viri, defunctaque corpora vita
> Magnanimum heroum, pueri innuptæque puellæ
> Impositique rogis juvenes ante ora parentum:*

each having left memories not easily forgotten; and many having biographies full of complicated incidents. Here, fortunately for this inquiry, they appear divested of all colour, form, character, passion, and the infinite individualities of life: by abstraction they are reduced to mere units undergoing changes as purely physical as the setting stars of astronomy or the decomposing atoms of chemistry; and as in those sciences so in this, the analysis of the elementary facts observed in their various relations to time and place will shed new light on the more complicated phenomena of national life.

The vital units to be specially dealt with are persons living and persons dying in the ten years 1861–70, only distinguishing them into units representing males and females of different ages and occupations, losing life year after year by various causes, in about 627 districts extending from the borders of Scotland to the English Channel and from the Irish Sea to the German Ocean. The deaths in the several classes have to be compared with the population enumerated at three decennial censuses, in corresponding groups.

The *long* series of Tables offers a retrospect extending over the ten years, and is in continuation of a series embracing the previous ten years, with which it is compared.

The primary object is to determine what the death-toll† is at the several ages, and what the causes of the loss of life are, under different circumstances. The importance of this determination will become ap-

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* Mothers and men, and bodies there with all the life outworn
Of great-souled heroes; many a boy and never-wedded maid,
And youths before their fathers' eyes upon the death-bale laid:
Morris.

† This compound of Saxon words appears to be preferable to "death-rate" or "death-tax;" it is equivalent to "rate of mortality."

parent by enumerating some of the relations the mortality bears to other orders of facts. There is a relation betwixt death and sickness; and to every death from every cause there is an average number of attacks of sickness, and a specific number of persons incapacitated for work. Death is the extinction of pain. There is a relation betwixt death, health, and energy of body and mind. There is a relation betwixt death, birth, and marriage. There is a relation betwixt death and national primacy: numbers turn the tide in the struggle of populations, and the most mortal die out. There is a relation betwixt the forms of death and moral excellence or infamy; men destroy themselves directly or their fellows under the most varied mental conditions; they may die by indulgence in excesses, by idleness, or by improvidence. Death is met especially in primeval races not only in conflicts with each other, but in conflicts with other races of animals — directly with great carnivorous quadrupeds or creeping poisonous serpents, and indirectly with four-footed animals, winged birds, and multitudinous insects, blighting or consuming food. Death is also wrought by low but organised parasites in the body. It is still more frequently the result of elementary molecules (zymads) which, though of no recognised form, evidently thrive, propagate, die in the bodies of men, disintegrating or devitalizing their tissues.

There is finally a relation betwixt death and the mean lifetime of man; if a life passing through a given time is represented by a line, death is the point of termination as birth is the point of origin. And a generation of men born together is represented by an indefinite number of such lines of life. The natural lifetime of man is a century; that age under ordinary conditions is, as the Etruscans remarked, attained by at least *one* in every considerable generation, and they made it their sæculum; as in that time are passed through all the phases of childhood, youth, manhood, maturity, and monumental age.* The mean lifetime in the healthiest districts of England—and in the healthiest ranks—is 49 years; and we have no evidence that under the most favourable conditions it exceeds 50 years. Actually individual life varies in duration from a second to a century. And the relation to be shown here is between the dying by different causes and the living at every stage of the march of a generation through time. The mean lifetime of a generation may be the same, and yet the several lifetimes of the individuals of which it is composed may vary infinitely; under the actual laws of mortality, great numbers die in infancy, few in adolescence, more in manhood, and, after infancy, the greatest number by the English Table at the age of *seventy-three*, the numbers born having fallen in the proportion of ten born alive to two then surviving. It is evident that an entire revolution in the life of the human race would follow if every person born lived the average lifetime of fifty years, or if half the deaths happened in infancy and the other half at the end of 100 years or at any very advanced age. What we observe actually is that in certain conditions the mean lifetime sinks to half its standard length; and that this is the result of the high mortality in the first five years, of the reduced mortality in adolescence, and of the increasing mortality in manhood up to the ultimate term of life; few old people surviving and few dying therefore after four score years, especially in such unfavourable conditions as exist in Liverpool.†

Under the existing state of things, of the constituent lives of every generation a certain number dies at every age of causes to be investigated under two heads:—direct and organical, including diseases and injuries; and remote and indirect, namely, the causes of those diseases and injuries. Before entering upon the investigation two preliminary questions have to be discussed.

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* See Census Report of 1851, Vol. I., p. xv.
† See Registrar-General's Fifth Report, pp. 35–6.

1. *Possibilities and Difficulties of extending Human Life.*

The laws of life are of the highest possible interest, even if the knowledge of those laws gave men no more power over the course of human existence than the meteorologist wields over the storms of the atmosphere, or the astronomer over the revolutions of the heavens. But all human laws proceed on the belief that the lives of individuals and of communities can, within certain limits, be regulated for good or for evil; and as latterly this has been questioned, it becomes necessary to discuss the problem—can lifetime be prolonged by a knowledge of the causes that cut it short, or by any means within a nation's power?

To live long is a natural aspiration and in the early years of the marvellous science of chemistry the alchemists sought with as much ardour as they sought the philosopher's stone for an *elixir vitæ* to confer on man perpetual prime; they promised him, by its discovery, immortality upon earth. The possibility of this seems to have been an ancient belief, for in one of the oldest legends man had been told that he should not die—that he should live for ever. And it had in it some grounds, or it could never have led the first Bacon, Descartes, Franklin, and Condorcet to intimate that human life might be prolonged indefinitely.*

---

* The views of Roger Bacon are expressed in the Epistola de Secretis operibus Artis et Naturæ, et de Nullitate Magiæ; and it is only fair to that great man to give his views as they are published by the Master of the Rolls among the previously unpublished works.

Title of the chapter: "Cap. VII. De retardatione accidentium senectutis, et de prolongatione vitæ humanæ."

"Et possibilitas prolongationis vitæ probatur per hoc, quod homo est naturaliter immortalis, et potens non mori, atque etiam post peccatum potuit vivere circiter mille annos; et deinceps paulatim abbreviata est vitæ longitudo. Ergo oportet quod hujusmodi abbreviatio sit accidentalis; quare poterit in toto vel in parte reparari. Sed si nos volumus causam accidentalem hujus corruptionis investigare, inveniemus quod non est a cœlo, neque ab alio, quam a defectu regiminis sanitatis. Nam in hoc quod patres corrupti sunt, generant filios corruptæ complexionis et compositionis; et filii ex eadem causa se corrumpunt; et sic devenit corruptio a patribus in filios, donec invalescat continua abbreviatio vitæ, sicut est die ista. Non tamen propter hoc sequitur quod abbreviabitur semper in minus, quia terminus in specie humana positus est, ut in pluribus vivant homines lxxx annis, 'sed amplior est eorum labor et dolor.' Remedium vero esset contra corruptionem propriam cujuslibet, si quilibet exerceat regimen completum sanitatis a juventute; quod consistit in his quæ sunt cibus, potus, somnus, vigilia, motus, quies, evacuatio, constrictio, aër, passio animi. Nam si quis hoc regimen conservaret, a nativitate, viveret quantum natura assumpta a parentibus permitteret, et duceretur ad ultimum terminum istius naturæ lapsæ ab originali justitia; quem tamen præterire non posset; quia hoc regimen non habet remedium contra corruptionem antiquam parentum. Sed impossibile est, quod homo sic regatur in omni mediocritate istorum, sicut exigit regimen sanitatis; et ideo oportet, quod abbreviatio vitæ contingat ex hac causa, non solum ex corruptione parentum. Ars vero medicinæ determinat hoc regimen sufficienter. Sed nec dives, nec pauper, nec sapiens, nec insipiens, nec ipsi medici quantumcunque periti, possunt hoc regimen in se, nec in aliis perficere, ut patet cuilibet. Sed natura non deficit in necessariis, nec ars completa; immo valet insurgere et irrumpere contra accidentales passiones, ut in parte vel in toto deleantur. Et a principio, quum incepit ætas hominum declinare, facile fuisset remedium; sed nunc, a sex millibus annorum et amplius, difficile est remedium apponi. Sapientes tamen moti considerationibus antedictis, nisi sciunt vias excogitare, non solum contra defectum proprii regiminis cujuslibet, sed contra corruptionem parentum; non quia reducatur homo ad vitam Adæ, vel Artephii propter corruptionem tam invalescentem; sed ut in centenarium annorum, vel plures, vita prolongetur ultra communem ætatem hominum nunc viventium; quatenus passiones senectutis retardentur, et cum prohiberi non possint, mitigentur; usquequo ultra estimationem humanam vita prolongetur utiliter; semper tamen citra ultimum terminum naturæ. Nam ultimus est terminus, qui in primis hominibus positus est post peccatum; et alius terminus est cuilibet ex propria et parentum corruptione. Ultra istos ambos non contingit transire, sed bene terminum propriæ corruptionis; nec tamen usque ad terminum primum, credo quod aliquis, quantumcunque sapiens his temporibus, posset attingere; licet possibilitas sit, et aptitudo naturæ humanæ ad illum terminum secundum quod fuit in primis hominibus.

"Nec mirum quum aptitudo ista se extendit ad immortalitatem, sicut fuit ante peccatum, et erit post resurrectionem. Sed si tu dicas quod nec Aristoteles, nec Plato, nec

The forces, as well as the constituents of the body, are in truth indestructible; but they are fugitive, and are perpetually passing out of the men of existing generations into other forms: the flame of consciousness shines in one life only for a while. But the alchemists were right when they saw virtues in minerals and trees to prolong as well as to shorten life; to check disease and to set the body free; for if mercury, arsenic, antimony, iron, potash, soda, magnesia, phosphorus, chlorine, iodine, sulphur, in their various salts and acids; if strychnia, quinine, opium, chloroform, æther, ipecacuanha, camphor, and alcohol; will kill, they will also cure in the hands of the skilful. Surgery too has its great triumphs. Therapeutics is not a delusion, the Healer is a reality. But no drug can do more than prolong life for a time; the man raised from the grave dies in the end. Life can be lengthened by regimen—by dietetics, which Celsus says engaged in his day the most eminent professors of medicine in Rome, because it is the most potent and philosophical,* dealing in regimen of mind and body, and medicinally controlling aliment, air, sleep, and exercise. The influence of the external world of air, water, soil, and climate on health and length of life was placed beyond doubt by the great treatise of Hippocrates. And Moses had before inculcated the exclusion of the sick by zymotic diseases from the Congregation. In these latter days science has gone further, and shown under what conditions the lifetime is long or short; and the science of life, yet only in its infancy, will make further progress, and solve many problems hitherto held to be insoluble, when hygiene is cultivated in all the medical schools. The genius of agriculture, of engineering, of industry, and of commerce is growing every year, and handling new power in new machines, is supplying new means of existence, and banishing fatal impurities.

Descent is easy, and onward motion over a level road is not difficult; but every step upwards to a higher state encounters obstacles; and so it is in the improvements of the human race. Of this a few examples are instructive:—small-pox is a fatal disease, and after it had been learnt that a milder type could be induced artificially, fatal to few of the inoculated, the practice was introduced in London, and was publicly performed in the years 1746–63 on 3434 persons at the small-pox hospital; only 60 of whom it is said died of the disease.† The mortality varied in different places, but it was nowhere considerable. What appeared so well fitted to justify Lady Mary Wortley Montague's exultation when she learnt in Turkey that "ingrafting" rendered small-pox harmless? "I am patriot enough," she wrote in 1718, "to take pains to bring this useful invention into fashion "in England." But it was found after it was brought that the deaths from small-pox in London, compared with the deaths from all other causes, and also the absolute mortality, increased considerably when inoculation

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Ypocras, nec Galienus, ad hujus vitæ prolongationem venerunt; respondeo tibi, quod nec ad multas veritates mediocres, quæ postea scitæ sunt per alios studiosos; et ideo hæc maxima potuerunt ignorare, quanquam ad hæc laboraverunt. Sed nimis se in aliis occupaverunt, et citius perducti sunt ad senectutem, consumentes vitam in pejoribus et vulgatis, quamvis vias ad hæc secreta perceperunt. Scimus enim quod Aristoteles dicit in Prædicamentis, quod quadratura circuli scibilis est, et sic fatetur se et omnes ignorasse usque ad tempus suum. Sed nos scimus his diebus quod scitur hæc veritas, et ideo longe magis potuit Aristoteles ulteriora naturæ secreta ignorare. Multa etiam modo ignorant sapientes quæ vulgus studentium sciet in temporibus futuris. Unde hæc objectio vana est per omnem modum.—*Fr. R. Bacon opera quædam hactenus inedita.* Vol. I., p. 540–2.

* "In tres partes medicina deducta est: et una esset, quæ victu; altera, quæ medicamentis; tertia, quæ manu mederetur. Ejus autem, quæ victu morbos curat, longe clarissimi auctores etiam, etiam altius quædam agitare conati, rerum quoque naturæ sibi cognitionem vindicarunt; tanquam sine ea, trunca et debilis medicina esset." (Celsus, *De Medicina*, Lib. I.)

† Duvillard cites Dr. Jurin, who prepared a table showing that out of 447 inoculated with effect 9 died; Dr. Monro inoculated 5554 persons, of whom 72 died; Dr. Gregory set down the mortality at 3 in 1000. By natural small-pox the mortality per 1000 attacked ranges from 150 to 300. See pages 112–114.

became common. Large numbers of children and adults remained unprotected, and inoculation kept the *variolads* alive in an artificial nursery. Inoculation is now made illegal. Again, hospitals were opened to receive people attacked by this dreadful disease, and to afford them the advantages of watchful attendance and skilful advice. This was carried out in London; but the mortality of the patients in the hospital was double the mortality by the disease outside.* Here was another apparent failure. But vaccination was a great advance on inoculation; the danger of the operation was quite inconsiderable, and cowpox, unlike small-pox, never scattered abroad the seeds of disease. In 1771–80 small-pox in London was the cause of 100 in every 1000 deaths, in 1831–5 of 27, in 1861–70 of 11, and in the absolute mortality by this disease there was a large reduction.† In the last two decenniads, 1851–70, the mortality per 100,000 by small-pox remained stationary in London at 28. In all England the mortality per 100,000 by small-pox declined from 22 to 16, or to the extent of 6; but population growing denser the mortality by scarlet fever rose from 88 to 97, thus increasing 9, or one and a half times as much as the mortality by small-pox decreased. The mortality by measles, diphtheria, and whooping-cough also increased. Vaccination diminished the chances of taking small-pox, and though it did not afford absolute security, it reduced the danger of its attacks. But, density of population increasing, other zymotic principles appeared to find in its absence freer scope for their destructive operations. In quenching the flames at one point the good work is begun but it is not ended.‡ Can zymotic diseases of all kinds never be quenched?

Out of pity for poor children Foundling hospitals were erected, but the babies nearly all perished, and a greater number than ever were abandoned. Had these hospitals succeeded the race of child-abandoning men must have been multiplied.

Another example is offered by the drainage of towns. In London the fatal refuse which had been retained in the houses was conveyed by water into the drains and into the Thames; and this was an advance on the previous state of things; but the sewers were charged with impurities; they put houses by their effluvia in communication with each other, and poured zymotic elements into the waters which were distributed by companies to the houses of both the wealthy and the indigent. And even at the present hour the sewage is pumped into the Thames, which it pollutes and obstructs, instead of being distributed over the land to which it belongs. The same difficulty in disposing of sewage is encountered in all English towns.

In the early ages the English population was scattered in slight dwellings over woods, meads, and undrained marshland, where they suffered from agues, rheumatisms, and famine fevers; as the people multiplied they assembled in cities and partook of a few of the advantages of civilization; but the increase of density brought new dangers, and, as the proximity of houses exposed towns to conflagrations, it laid their inhabitants open to devastating maladies, and to destructive pestilences. The people flocked in numbers to London in the reigns of Henry VIII., of Elizabeth, and of James, and the sweating sickness and fevers and the oriental plague decimated the population. The Restoration brought country families to the metropolis, and the plague made its ever-memorable swoop. The manufactures, the mines, and the great works that create subsistence for thousands collect workmen in towns as ill-provided with sanitary appliances as ill-organised camps; and thus Lancashire, Yorkshire, Durham,

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* The mortality in the Small-pox Hospital was at the rate of 25 per cent. in 1746–63, for 1634 of 6456 patients died. For later returns see Letter to the Registrar General in Appendix to 34th Report.

† See Article on Vital Statistics, in M'Culloch's Account of the British Empire, Vol. II., pp. 610–13.

‡ See Appendices to Registrar-General's Reports.

The forces, as well as the constituents of the body, are in truth indestructible; but they are fugitive, and are perpetually passing out of the men of existing generations into other forms: the flame of consciousness shines in one life only for a while. But the alchemists were right when they saw virtues in minerals and trees to prolong as well as to shorten life; to check disease and to set the body free; for if mercury, arsenic, antimony, iron, potash, soda, magnesia, phosphorus, chlorine, iodine, sulphur, in their various salts and acids; if strychnia, quinine, opium, chloroform, æther, ipecacuanha, camphor, and alcohol; will kill, they will also cure in the hands of the skilful. Surgery too has its great triumphs. Therapeutics is not a delusion, the Healer is a reality. But no drug can do more than prolong life for a time; the man raised from the grave dies in the end. Life can be lengthened by regimen—by dietetics, which Celsus says engaged in his day the most eminent professors of medicine in Rome, because it is the most potent and philosophical,* dealing in regimen of mind and body, and medicinally controlling aliment, air, sleep, and exercise. The influence of the external world of air, water, soil, and climate on health and length of life was placed beyond doubt by the great treatise of Hippocrates. And Moses had before inculcated the exclusion of the sick by zymotic diseases from the Congregation. In these latter days science has gone further, and shown under what conditions the lifetime is long or short; and the science of life, yet only in its infancy, will make further progress, and solve many problems hitherto held to be insoluble, when hygiene is cultivated in all the medical schools. The genius of agriculture, of engineering, of industry, and of commerce is growing every year, and handling new power in new machines, is supplying new means of existence, and banishing fatal impurities.

Descent is easy, and onward motion over a level road is not difficult; but every step upwards to a higher state encounters obstacles; and so it is in the improvements of the human race. Of this a few examples are instructive:—small-pox is a fatal disease, and after it had been learnt that a milder type could be induced artificially, fatal to few of the inoculated, the practice was introduced in London, and was publicly performed in the years 1746–63 on 3434 persons at the small-pox hospital; only 60 of whom it is said died of the disease.† The mortality varied in different places, but it was nowhere considerable. What appeared so well fitted to justify Lady Mary Wortley Montague's exultation when she learnt in Turkey that "ingrafting" rendered small-pox harmless? "I am patriot enough," she wrote in 1718, "to take pains to bring this useful invention into fashion in England." But it was found after it was brought that the deaths from small-pox in London, compared with the deaths from all other causes, and also the absolute mortality, increased considerably when inoculation

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Ypocras, nec Galienus, ad hujus vitæ prolongationem venerunt; respondeo tibi, quod nec ad multas veritates mediocres, quæ postea scitæ sunt per alios studiosos; et ideo hæc maxima potuerunt ignorare, quanquam ad hæc laboraverunt. Sed nimis se in aliis occupaverunt, et citius perducti sunt ad senectutem, consumentes vitam in pejoribus et vulgatis, quamvis vias ad hæc secreta perceperunt. Scimus enim quod Aristoteles dicit in Prædicamentis, quod quadratura circuli scibilis est, et sic fatetur se et omnes ignorasse usque ad tempus suum. Sed nos scimus his diebus quod scitur hæc veritas, et ideo longe magis potuit Aristoteles ulteriora naturæ secreta ignorare. Multa etiam modo ignorant sapientes quæ vulgus studentium sciet in temporibus futuris. Unde hæc objectio vana est per omnem modum.—*Fr. R. Bacon opera quædam hactenus inedita.* Vol. I., p. 540–2.

* "In tres partes medicina deducta est: et una esset, quæ victu; altera, quæ medicamentis; tertia, quæ manu mederetur. Ejus autem, quæ victu morbos curat, longe clarissimi auctores etiam, etiam altius quædam agitare conati, rerum quoque naturæ sibi cognitionem vindicarunt; tanquam sine ea, trunca et debilis medicina esset." (Celsus, *De Medicina*, Lib. I.)

† Duvillard cites Dr. Jurin, who prepared a table showing that out of 447 inoculated with effect 9 died; Dr. Monro inoculated 5554 persons, of whom 72 died; Dr. Gregory set down the mortality at 3 in 1000. By natural small-pox the mortality per 1000 attacked ranges from 150 to 300. See pages 112–114.

became common. Large numbers of children and adults remained unprotected, and inoculation kept the *variolads* alive in an artificial nursery. Inoculation is now made illegal. Again, hospitals were opened to receive people attacked by this dreadful disease, and to afford them the advantages of watchful attendance and skilful advice. This was carried out in London; but the mortality of the patients in the hospital was double the mortality by the disease outside.* Here was another apparent failure. But vaccination was a great advance on inoculation; the danger of the operation was quite inconsiderable, and cowpox, unlike small-pox, never scattered abroad the seeds of disease. In 1771–80 small-pox in London was the cause of 100 in every 1000 deaths, in 1831–5 of 27, in 1861–70 of 11, and in the absolute mortality by this disease there was a large reduction.† In the last two decenniads, 1851–70, the mortality per 100,000 by small-pox remained stationary in London at 28. In all England the mortality per 100,000 by small-pox declined from 22 to 16, or to the extent of 6; but population growing denser the mortality by scarlet fever rose from 88 to 97, thus increasing 9, or one and a half times as much as the mortality by small-pox decreased. The mortality by measles, diphtheria, and whooping-cough also increased. Vaccination diminished the chances of taking small-pox, and though it did not afford absolute security, it reduced the danger of its attacks. But, density of population increasing, other zymotic principles appeared to find in its absence freer scope for their destructive operations. In quenching the flames at one point the good work is begun but it is not ended.‡ Can zymotic diseases of all kinds never be quenched?

Out of pity for poor children Foundling hospitals were erected, but the babies nearly all perished, and a greater number than ever were abandoned. Had these hospitals succeeded the race of child-abandoning men must have been multiplied.

Another example is offered by the drainage of towns. In London the fatal refuse which had been retained in the houses was conveyed by water into the drains and into the Thames; and this was an advance on the previous state of things; but the sewers were charged with impurities; they put houses by their effluvia in communication with each other, and poured zymotic elements into the waters which were distributed by companies to the houses of both the wealthy and the indigent. And even at the present hour the sewage is pumped into the Thames, which it pollutes and obstructs, instead of being distributed over the land to which it belongs. The same difficulty in disposing of sewage is encountered in all English towns.

In the early ages the English population was scattered in slight dwellings over woods, meads, and undrained marshland, where they suffered from agues, rheumatisms, and famine fevers; as the people multiplied they assembled in cities and partook of a few of the advantages of civilization; but the increase of density brought new dangers, and, as the proximity of houses exposed towns to conflagrations, it laid their inhabitants open to devastating maladies, and to destructive pestilences. The people flocked in numbers to London in the reigns of Henry VIII., of Elizabeth, and of James, and the sweating sickness and fevers and the oriental plague decimated the population. The Restoration brought country families to the metropolis, and the plague made its ever-memorable swoop. The manufactures, the mines, and the great works that create subsistence for thousands collect workmen in towns as ill-provided with sanitary appliances as ill-organised camps; and thus Lancashire, Yorkshire, Durham,

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* The mortality in the Small-pox Hospital was at the rate of 25 per cent. in 1746–63, for 1634 of 6456 patients died. For later returns see Letter to the Registrar General in Appendix to 34th Report.

† See Article on Vital Statistics, in M'Culloch's Account of the British Empire, Vol. II., pp. 610–13.

‡ See Appendices to Registrar-General's Reports.

South Wales, are still in a high degree insalubrious. Until the Legislature, led by Lord Shaftesbury, intervened, the lives of young children and mothers were barbarously sacrificed in the factories and mines. Here is seen again the success with which evil poisons the healing springs of industry.

The low wages of large numbers of artisans in towns deprived them of the means of healthy life; latterly wages have risen, and they had the command of those means to a larger extent, but unfortunately the consumption of spirits, and other stimulants absorbed their wages to the no small detriment of health. To sweep out the dusty and close workshops they are apt to be made draughty, so difficult is it to improve the health of artisans.

In the last twenty years the towns of England have increased from five hundred and eighty to nine hundred and thirty-eight; their population from nine to fourteen millions; and the health of the whole population of the country has remained stationary.

Breeders reject weakly animals from their stock, and thus achieve success. By the care now taken of the humblest member of the human race the weakly, it is said, survive; they marry and propagate, and thus, as some contend, the proportion of inferior organizations is raised. The imbecile, the drunkard, the lunatic, the criminal, the idle, and all tainted natures were once allowed to perish in fields, asylums, or gaols, if they were not directly put to death, but these classes and their offspring now figure in large numbers in the population.

2. *Probable Decrease of Mortality.*

Such are samples of the many obstacles to the sanitary progress of a nation, and it is evident that at present they can only be overcome in part; but there is no ground for despair. There has been progress. The mean lifetime of sovereigns and peers is prolonged; it was in past ages much shorter than the lifetime of the unhealthy labourers in the cities of to-day.* The mortality of the city of London was at the rate of 80 per 1000 in the latter half of the seventeenth century, 50 in the eighteenth, against 24 in the present day. The mortality in the liberties of the city of London within and without the walls was in the four plague years 1593, 1625, 1636, 1665, at the rate of 24, 31, 13, and 43 per cent. In the city alone 90,472 persons died of plague in the four epidemics, and 55,604 of other diseases. The enumerated population of the city was 130,178 in 1631.† In the cholera epidemic year of 1849 the mortality from all causes in the metropolis was only 3 per cent. And in the last two epidemics there was a further decline. Thus it is as certain that the high mortality can be reduced by hygienic appliances down to a certain limit as it is that human life can be sacrificed.

The analysis of the causes of the mortality renders it still further certain that the actual mortality of the country can be reduced. Many of the destroyers are visible, and can be controlled by individuals, by companies, and by corporate bodies, such as explosions in coal mines, drowning in crazy ships, railway collisions, poisonings, impurities of water, pernicious dirts, floating dusts, zymotic contagions, crowdings in lodgings, mismanagements of children, neglects of the sick, and abandonments of the helpless or of the aged poor.

Furthermore, including the London district of Hampstead, there are fifty-four large tracts of England and Wales which actually experience a mortality at the rate of only seventeen per 1000—less by *five* than the average mortality per 1000 of the whole country, less by *ten* than in nine

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* See McCulloch's account of the British Empire. Vol. II, pp. 552–3,
† *Ibid*, p. 602 and pp. 612–13.

districts, and less by *twenty-two* than the mortality reigning for ten years in Liverpool. Now the healthy districts have a salubrious soil, and supply the inhabitants with waters generally free from organic impurities. The people are by no means wealthy; the great mass of them are labourers and workpeople on low wages, whose families get few luxuries, and very rarely taste animal food. Their cottages are clean, but are sometimes crowded, and impurities abound; the sanitary short-comings are palpable.

It will not, therefore, be pitching the standard of health too high to assert that any excess of mortality in English districts over *17 annual deaths* to every 1000 living is an excess not due to the mortality incident to human nature, but to foreign causes to be repelled, and by hygienic expedients conquered.

It is right to state that the real is greater than the apparent mortality of these districts; they are increasing, and contain an undue proportion of population at the younger healthiest ages, so that a correction for this makes the mortality *20* instead of *17*. That is the rate of their stationary mortality if the population were stationary, if births equalled deaths, and there were no migration.*

The mean annual deaths at the rate of 22·4 in the ten years 1861–70 were 479,450 in England; and had the rate of mortality been 17 the annual deaths would not have exceeded 363,617; so the overplus due to the operation of causes existing, but less destructive in the healthier districts was 115,833. The hope of saving any number of these 115,833 lives annually by hygienic measures is enough to fire the ambition of every good man who believes in human progress.

3. *Increase of Population in* Geometrical Progression *and its effects on Health and Mortality.*

But here an objection has been started:—the natural increase of population, instead of proceeding at the actual rate of about 1·3, would, it is said, be in the end 1·8 per cent. annually; it would go on indefinitely, and would double the population every 39 years; at the natural rate actually prevailing, upon this hypothesis the population will double itself in 55 years. This question has, therefore, to be discussed.

4. *Increase and Decrease of Population.*

Mr. Malthus calculated that the unrestrained principle of population would fill not only the earth with men, but people all the planets of all the suns that shine in the visible universe.† And latterly the President of the Health Officers of London, finding that the proportion of children that die under five years of age is more than 40 per cent. of the total deaths in England and Wales, remarks:‡—"If this were not so, the increase "of population would be prodigious; for it is the means whereby the "annual excess of births over deaths is kept down to the reasonable pro- "portion of 12·8 per 1000 of the population. If it reached to 18 per

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* The mean lifetime was 49, and the annual rate of mortality per 1000 was 20·4.

† Malthus had the following passage in one edition of his Political Economy: "If any person will take the trouble to make the calculation, he will see that, if the necessaries of life could be obtained without limit, and the number of people could be doubled every 25 years, the population which might have been produced from a single pair since the Christian era would have been sufficient, not only to fill the earth quite full of people, so that four should stand upon every square yard, but to fill all the planets of our solar system in the same way, and not only them, but all the planets revolving round the stars which are visible to the naked eye, supposing each of them to be a sun, and to have as many planets belonging to it as our sun has." [Quotation from Malthus' "Principles of Political Economy," p. 227, in Godwin on "Population," p. 484. I do not find the passage in the second edition of the "Principles"].

‡ On the Estimation of Sanitary Condition. By H. Letheby, M.B., pp. 20–21.

" 1000 * * the population would be doubled in rather less than 40 " years. Consider for a moment the consequences of this. * * In 40 " years the population of England and Wales would be over 45,000,000 " * * in 120 years * * it would be near 182,000,000. * * This " sort of thing could never last; for in about 240 years the population " of England and Wales, unless it was exported in huge masses, would " reach to rather more than 1550 millions, and it would be as thickly " placed over the whole country as it is in London at the present moment." At the rate here called " reasonable," the population by the hypothesis would double itself every 54½ years, so that the time in which the dreaded catastrophe would overwhelm this nation could only be deferred 87 years by the continued Herodian sacrifice. On a par with this is Dr. Price's illustration of the power of compound interest: " One penny put out at our " Saviour's birth to five per cent. compound interest would in the year " 1791, have increased to a greater sum than would be contained in three " hundred millions of earths, all solid gold." †

There is evidently something singularly seductive in these applications of the abstract doctrine of series in geometrical progression to actual facts: even Justice Blackstone is led by geometrical progression to make the following statement:—

" The doctrine of lineal consanguinity is sufficiently plain and obvious; but it is *at the* " *first view astonishing to consider the number of lineal ancestors which every man has,* " within no very great number of degrees; and so many different bloods is a man said " to contain in his veins, as he hath lineal ancestors. Of these he hath two in the first " ascending degree, his own parents; he hath four in the second, the parents of his " father and the parents of his mother; he hath eight in the third, the parents of his " two grandfathers and two grandmothers; and by the same rule of progression, he " hath an hundred and twenty-eight in the seventh; a thousand and twenty-four in " the tenth; and at the twentieth degree, or the distance of twenty generations, every " man hath above a *million of ancestors*, as common arithmetic will demonstrate." This is further explained in the note. " This will seem surprising to those who are un- " acquainted with the increasing power of progressive numbers; but is palpably evident " from the following table of a geometrical progression, in which the first term is 2, and " the denominator also 2; or, to speak more intelligibly, it is evident, for that each of " us has two ancestors in the first degree; the number of whom is doubled at every " remove, because each of our ancestors has also two immediate ancestors of his own.

Lineal Degrees.	Number of Ancestors.	Lineal Degrees.	Number of Ancestors.
1	2	11	2,048
2	4	12	4,096
3	8	13	8,192
4	16	14	16,384
5	32	15	32,768
6	64	16	65,536
7	128	17	131,072
8	256	18	262,144
9	512	19	524,288
10	1,024	20	1,048,576

" A shorter method of finding the number of ancestors at any even degree is by " squaring the number of ancestors at half that number of degrees.‡ Thus 16 (the " number of ancestors at four degrees) is the square of 4, the number of ancestors at " two; 256 is the square of 16; 65536 of 256; *and the number of ancestors at 40* " *degrees would be the square of 1,048,576*, or upwards of a *million millions.*" [Chitty's Blackstone's Commentaries, 21st Edition, Vol. 2., pp. 203–204.]

Mr. Malthus argues that population, if unrestrained, will double itself every twenty-five years §; but let it be assumed that the doubling period is lower, or equal to 33⅓ years—that is the mean interval between two generations—according to the common reckoning, then, beginning at one

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† Price's Observations on Reversionary Payments, vol. 1. p. 314.

‡ Let a = first term, n the number of terms, and r the rate; then evidently $ar^{\frac{n}{2}} r^{\frac{n}{2}} = ar^{n}$.

§ Which implies an annual rate of increase of 2·81 per cent.

end of the series, a pair in 40 such periods (1333 years) will yield more than a million millions of descendants; and beginning at the other end and proceeding backwards, according to Mr. Justice Blackstone each descendant has more than a million millions of ancestors! Geometrical progression, like Ariosto's Ippogrif, is evidently a difficult horse to ride, and sometimes lands people in strange conclusions:

> Poggia l'auge!, nè può Ruggier frenarlo:
> Di sotto rimaner vede ogni cima
> Ed abbassarsi in guisa, che non scorge
> Dove è piano il terren nè dove sorge.*
>
> *Orlando Furioso, Canto* IV., 349.

The fallacy that deceives Blackstone in the latter case is the want of continuity in the law of the series; a man has, it is true, four ancestors in the second degree, because the marriage of brother and sister is prohibited and there is a fusion of four bloods; but as the marriage of first, second, and every order of cousins is permitted under this law, no more than four ancestors are indispensable to the fortieth man in descent; without the prohibition the whole of the human race might evidently be traced up to two ancestors—and two bloods. The mind is led on through the first step, as Blackstone was, to the inference that because a man has a father and a mother, and 2 grandfathers and 2 grandmothers—he must have 8 great grandfathers and great grandmothers, and so on; which is not necessary, and if pursued far enough becomes improbable, absurd, impossible.

The hypothesis of increase of population in geometrical progression had been advanced before,† but Malthus in his practical applications of it brought it home to the public mind, and led to further researches, and to exciting controversies. Godwin—a man of genius—whose work on Political Justice had suggested the controversial essay of Malthus in 1798, answered it in his *Enquiry concerning Population*, and Sadler collected a great many facts in his work.‡ The facts at the disposal of the respective writers were numerous, but they were incomplete, and in England the statistical facts we now possess respecting the conjugal condition of the men and women living at the several ages were then entirely absent, as the information in the early censuses was meagre. All that is further wanted now in the English Birth Schedule to clear up this vital question conclusively is the entry of the ages of the mother and father at the birth of their children, and the order of the births.§ Instead of discussing the principle of population and the hypothesis of increase in geometrical progression—which its authors have reduced to absurdity—I propose to state enough of what is known to prove that a reduction in the rate of mortality can be attended by none but the most salutary effects to the nation.

Population is sustained when the births equal the deaths in the same time; when the deaths exceed the births population declines, and when the births exceed the deaths population increases. Migration is here left out of account. The balance is affected by the changes in each of two variables; thus, if the population of England was stationary the deaths would be at the rate of 2·447 per cent., the births 2·447 also; the difference is *zero:* but the population increases, as we have seen, so the

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* Thus translated, but not happily, by W. Stewart Rose:

> "The griffin soars, nor can Rogero stay
> The flying courser; while, beneath his ken,
> Each peak and promontory sinks in guise,
> That he discerns not flat from mountain-rise."

† Voltaire, after giving it as his opinion that the population of Europe had tripled since the time of Charlemagne, adds with his incisive common sense: "J'ai dit triplé, "et c'est beaucoup; car on ne propage en progression géométrique. Tous les calculs "qu'on a faits sur cette prétendue multiplication sont des chimères absurdes." *Dict. Philosophique*, Art. *Population.*

‡ Godwin on Population, 1820. Sadler on Law of Population, 2 Vols., 1830.

§ Done in the Registers of our Australian Colonies.

deaths are at the rate of 2·242, and the births not only equal but surpass the deaths in every 100 of population by 1·264, which is therefore the natural increase. The mean lifetime in England is 41 years. Should it become as long as it is in the healthiest districts it will be 49 years; and instead of 1 death and 1 birth to 41 living there will be 1 death and 1 birth to 49 living, the latter implying an annual rate of 2·041. An increase of the years men live involves a decrease of the annual mortality, but not necessarily any increase of population; for the birth-rate may fall to an equivalent extent.

The death-rate of a population is under control, but not to the same extent as the birth-rate, which depends on voluntary marriage and fertility, which have hitherto been marvellously regulated so as to meet generally the demand for men. Thus, England has an increasing industry and a vast colonial empire to people, so the births are numerous. In France the death-rate in the ten years was 2·36, differing a little (0·12 in excess) from that of England; but the birth-rate was only 2·63 in France* instead of 3·51 as it was in England. France had no colonial demand for population, and so the population was not depressed by a high death-rate but by a low birth-rate. The increase of population was only 0·27 per cent. per annum.

Many species of animals have, as the geological records of the world show, perished; and man could never have survived the perils of his early historic, to say nothing of his prehistoric, life had his race not been endowed with a reserve of reproductive force sufficient to repair the recurrent wastes of famines, wars, and plagues. At the present hour in England half of the women of the child-bearing ages are unmarried; and though the annual births maintain an actual excess over the deaths, they are kept down to half their possible number. A flow of prosperity in the country is immediately followed and marked by the launch of a whole fleet of marriages. The ruin of an industry or the depression of a trade implies a stagnation of marriages.† There are thousands of couples always on the look-out, ready to embark as the prospects brighten.

It has been observed that after the ravages of plagues the births increase,‡ so the aching voids are filled up as regards mere numbers. Under ordinary conditions an increased death-rate is attended by an increased birth-rate, so as either to maintain the population stationary or increasing, according to the exigencies of the case. This is only possible within certain limits, for an excessive death-rate is attended with such waste that it cannot be overtaken by the births; the population declines, or is only sustained by immigration. We have the means of establishing this law by English observations.

5. *Relation between Death-rates and Birth-rates.*

Arranging the districts of England in the order of their mortality, it is found that the annual mortality in the various groups ranges from the rate of 15 to 39 per 1000; the birth-rate from 29 to 40 per 1000; and it is seen that, in the next Table, as the death-rate increases, the birth-rate increases, so that in all the districts with a mortality under 25 per 1000 the natural increase of population is very constant. The mortality increases with the density of the population; and thus every additional death is met by an additional birth.

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* See Registrar General's 35th Report, p. cxxi.

† See Registrar General's 35th Report, p. ix.

‡ The London bills of mortality showed 64,544 christenings in the ten years, 1651–60, before the Great Plague; and in the ten years 1661–70, including the year of the Great Plague, 106,755 births. Collection of yearly Bills of Mortality, Obs. of Corbyn Morris, p. 80. See also Süssmilch's observations quoted by Malthus on Population, Vol. 2, p. 178, 5th edition.

ENGLAND AND WALES. — **Density of Population; Annual Death-rate; Annual Birth-rate; Annual Excess of Births over Deaths;** and the **Annual Increase of Population per 1000 Persons living** in SEVEN GROUPS of DISTRICTS arranged in the ORDER of MORTALITY.

Number of *Districts.*	Range of Mortality: Rates per 1000 Persons.	Persons to a Square Mile.	1861–70. To 1000 PERSONS LIVING. Average Annual Deaths.	Average Annual Births.	Average Annual Excess of Births over Deaths.	Average Annual Increase of Population in middle of period.
ENGLAND & WALES 619	15–39	367	22·4	35·1	12·6	12·4
54	15–17	171	16·7*	30·1*	13·4	15·8
349	18–20	195	19·2	32·2	13·0	8·8
142	21–23	447	22·0	35·6	13·6	16·2
56	24–26	2,185	25·1	38·1	13·0	15·3
16	27–30	6,871	27·8	39·1	11·3	8·9
1	32	12,172	32·5	37·8	4·8	3·2
1	39	65,834	38·6	37·6	−1·0	−12·3

The Table may be read thus:—In 349 districts where the rates of mortality range from 18 to 20 per 1000 there were 195 persons to each square mile of area; the average annual death-rate in these districts was 19·2, the birth-rate 32·2; the average annual excess of births over deaths was 13·0, and the actual average annual increase of enumerated population was 8·8 per 1000 persons living.

* These rates are obtained by dividing the aggregate deaths and births in the districts having an average annual mortality among persons ranging from 15 to 17 by the aggregate population of those districts $\left(\frac{D}{P}\right)$. Each group is treated in the same manner.

In the first stage of the scale, that is in the 54 healthy districts, the death-rate is 16·7, the birth-rate 30·1; in the second stage the death-rate is 19·2, the birth-rate 32·2; in the third stage the death-rate is 22·0, the birth-rate 35.6; in the fourth stage the death-rate is 25·1, the birth-rate is 38·1. The natural increase of population in each of these four stages ranges from 13·0 to 13·6, or is severally 13·4, 13·0, 13·6, 13·0. When the mortality reaches the *fifth stage* the death-rate is 27·8, the birth-rate 39·1; and after that point, while the death-rate increases to 32·5 in Manchester and 38·6 in Liverpool, the birth-rate recedes at last exhausted to 37·3 and 37·6; children enough are no longer forthcoming, and there is a decrease of indigenous population, which if it should go on might end in a decrease of population in geometrical progression.

Should the deaths in the districts where the mortality is 22·0 per 1000 be reduced by sanitary measures to the same level as in the districts where the mortality is 19·2, the births might be reduced in the same or a greater degree, namely from 35·6 to 32·2; and should the death-rate be brought down to 16·7, the birth-rate might be reduced, as in the healthiest districts, to 30·1; the deaths falling 5·3, the births actually fell 5·5 per 1000, as shown in the table. The fall of the birth-rate is observed in the existing circumstances of this country; it maintains an uniform increase in districts under different laws of mortality, but it is not a necessary consequence of a reduced death-rate, and if, in the opinion of the parties concerned, their prospects are good, they marry and procreate children at the same rate as before; in that case the population increases faster; whereas in a depressed condition the births fall off until the population becomes stationary, or declines.

Thus there is no inevitable connection between the gradual reduction of the mortality of the whole kingdom to the rate of 17 per 1000 and the more rapid increase of population; because the birth-rate may of itself fall to the level of that now prevailing in the healthiest districts and leave the increase of population as it was. Statesmen are not then, by alarming cries of increase of population in a faster geometrical progression, to be deterred from the noblest work in which they can engage; for it is certain that population as it improves in England will not increase faster than the requirements of industry in all its forms at home or the new openings of colonial enterprise abroad.

6. *Instances of the effects of Industrial Enterprise on Death and Birth Rates.*

Such is the general law governing the facts hitherto observed in England over a long series of years. It will be interesting now to give a few illustrative cases of the changes in the marriage, birth, and death rates (1.) where a new industrial enterprise has been suddenly developed, and (2.) where a branch of industry is declining. As instances of the former, take the districts of Ulverston, Guisbrough, and Stockton; of the latter St. Austell and Redruth in Cornwall, where the works and the population decline.

Ulverston contains Barrow-on-Furness. It owes the increase to a cause thus referred to in the Quarterly Return of the Registrar-General :—*

"The mortality often augments with the increased prosperity of a district; and this is curiously illustrated by Ulverston, a romantic district extending from Morecambe Bay to Lake Windermere. Ulverston, in the ten years, 1841–50, was one of the healthiest districts of England; the mortality did not exceed 18 in 1000. A change took place, and in the ten years 1851–60 the mortality rose to 20 in 1000. The deaths in the June quarter of 1864 were considerably above the average of previous years, caused, says the registrar of Dalton, 'in part by the increase of the population, and in part by 'the prevalence of scarlatina and measles.' He adds: 'but there is no distress; work 'is plentiful, wages good, and provisions cheap. Labourers are earning 3*s.* 6*d.* a day; 'artisans 4*s.* 3*d.* and upwards.'

"The population of many of the townships and parishes of the Ulverston district, at the feet of its fells, and round the shores of its meres, is stationary, and in some instances has declined; it is an old iron district, which had seen its works decay when coal came into use for smelting, but of late a pure hæmatite ore has been discovered in the carboniferous limestone of Dalton-in-Furness, for which there is a great demand. The population of the parish rose from 4683 to 9152 in the interval of the two last censuses, and, with the parishes in its vicinity, gave the increase which raised the population of Ulverston district from 30,556 in 1851 to 35,738 in 1861.

"The mortality of the district of Ulverston, exlcusive of Dalton, in the two last quarters, was at the rate of 26 and 23 in 1000; while that of Dalton was at the rate of 42 and 31; and it is in this sub-district that the spectacle is presented of 'work plentiful, wages good, provisions cheap,' and 'the prevalence of destructive epidemics.' This coincidence is reproduced over and over again. And it must not be supposed on that account that work, good wages, and cheap provisions are in themselves bad things; for they are as salutary as they are attractive to the masses of mankind. But our industrial armies are cut down by the camp diseases which are generated by the inadequate house accommodation, and by the want of sanitary arrangements, which are never carried out in the neighbourhood of new works. Impure water, impure air, their own exhalations, kill men, women, and children on the spot, and breed the leaven which devastates the towns and valleys in the vicinity. For the sins of a parish are often visited on its neighbours in thousands round. Thus South Wales has been rendered prosperous by the mines, and unhealthy by the negligence of the people. The mining population appears to be even less careful of life than the manufacturing population."

The increase of population went on; for the excess of births exceeded the excess of deaths.

This timely warning was not lost on the energetic authorities of Barrow-on-Furness; and though the mortality in the three decenniads

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* Quarterly Return No. 62, for second quarter of 1864.

that ended in 1870 increased and was 18, 20, 21, it has gone no further; sanitary measures have been undertaken and are still proceeding. The marriage-rate and the birth-rate, evoked to a higher pitch by the prosperity of the place, rose more rapidly than the death-rate. In cases of this kind of rapid concentration of population the high birth-rate is not the cause of the high death-rate; the first is caused by the prosperity, the second by the defective sanitary provisions. All the rates had been low in the first healthiest decenniad, quite in conformity with the general law.

Guisbrough and Stockton, including Middlesborough, exhibit a similar series of phenomena; the population became thicker and the mortality increased; the marriages and births also increased.

With a declining copper and tin industry in St. Austell and in Redruth, Cornwall, the mortality slightly declined; but to nothing like the same extent as the marriage and the birth-rates.

Increasing Populations, OWING TO RAPID DEVELOPMENT OF INDUSTRY.

Registration Districts.	Years.	Persons living at the Censuses of 1861 and 1871.	Average Annual Number of			Rates per 1000 living.		
			Deaths.	Persons married.	Births.	Deaths.	Persons married.	Births.
Ulverston (incls Barrow-in-Furness)	1860-1-2	35,738	751	465	1313	21·0	13·6	36·7
	1870-1-2	55,083	1150	958	2259	20·9	17·4	41·0
Guisbrough (incs part of Middlesborough)	1860-1-2	22,128	449	294	913	20·3	13·3	41·2
	1870-1-2	39,016	966	687	1764	24·8	17·6	45·2
Stockton (includs part of Middlesborough)	1860-1-2	57,099	1331	1056	2488	23·3	18·5	43·6
	1870-1-2	99,705	2565	1994	4501	25·7	20·0	45·1
Decreasing Populations, OWING TO DECLINE OF MINING ENTERPRISE.								
St. Austell	1860-1-2	33,797	673	573	1230	19·9	17·0	36·4
	1870-1-2	31,194	605	437	1007	19·4	14·0	32·3
Redruth (includs Camborne)	1860-1-2	57,173	1301	1041	2059	22·8	18·2	36·0
	1870-1-2	53,503	1196	880	1734	22·3	16·4	32·4

The general law deduced from the preceding Table and these illustrative exceptional instances of sudden increase and decrease of population enable us to understand how much of the "principle of population" so forcibly proclaimed by Malthus is true, and how much of it is erroneous.

7. *The Principle of Population.*

It is true that all plants and animals have the power of multiplication; and man in conformity with that law has the power of doubling his numbers every twenty-five years under favourable conditions, and within definite limits of space and time, the limit being soon attained without the exercise of skill and industry in supplying his wants; but his struggles for the means of living, as a race, were greater at first when his numbers were fewer than they are now in England. The numbers of mankind never actually increase as the numbers in the geometrical series 1, 2, 4, 8, 16, 32, 64, 128, 256, 512.... indefinitely; and subsistence never increases as the numbers in the arithmetical series 1, 2, 3, 4, 5, 6, 7, 8, 9, 10..... indefinitely. But the population of a country may increase in geometrical progression for a certain number of years, and so may its subsistence, understanding by that all that supplies men's wants. Mr. Malthus found when he wrote that the population of the United States had been said

for a century and a half to double itself every 25 years; and now it is known by the Census that the population, after the year 1790, increased very regularly at the rate of 3 per cent. annually for the seventy years ending with 1860; at that rate population doubles itself in 23⅓ years. The increase, however, was not "by procreation only," but partly by excess of births and partly by immigration of blacks from Africa, of whites from Europe. Population increased in geometrical progression at a certain rate, but subsistence also increased in geometrical progression at a faster rate; so that the pressure of population on subsistence grew less and not greater. In the last ten years productive labour slackened and the flow of population ebbed; during the civil war English emigrants returned to England; there was loss of life in the field, and although for lack of a national system of registration it cannot be set forth in figures, the marriage and birth-rates must have declined, for the population increased, not 3 per cent., but 2 per cent. annually between the two Censuses of 1860–70. Yet the produce increased, the wheat from 173 to 288 million bushels; the value of all live stock from 218 to 305 millions of pounds sterling.

The increase of produce from 1850 to 1860 may be inferred from two orders of facts. The number of farms rose from 14 to 20 hundred thousand, while the area of improved land from 113 grew to 163 million acres; and the value of live stock rose from 109 to 218 millions of pounds. Population only increased in those ten years from 23 to 31 millions.*

And in the earlier years, though not recorded, the produce increased undoubtedly as nearly in geometrical progression as the population counted at each census; and if the early censuses prove that population increases, the recent censuses prove that subsistence increases in geometrical progression. Had Malthus had before him the returns of produce as well as population in America, he could scarcely have fallen into the error of laying it down, that while population increases in a geometrical, subsistence increases in an arithmetical progression.

There is a limit to the increase of both people and produce; but the tendency now is as men endowed with skill, weapons, tools, and marvellous machines are diffused over the world, to create subsistence faster than population.

In the first edition of his work† Malthus lays it down that (1) "population "cannot increase without the means of subsistence," that (2) "population "does invariably increase where there are the means of subsistence;" and (3) "that the superior power of population cannot be checked without "producing misery or vice."‡ Shrinking from the explicit expression evidently implied by his argument that "the superior power of population "cannot be checked without producing misery or vice," he left out of account the fact that at the prolific age a large proportion of the women of every civilized population is unmarried and virtuous; this being only partially recognized in the subsequent editions under the phrase "moral restraint." Instead of simply stating that the population is kept down by any causes that diminish the births and increase the deaths, he uses in the last edition the vague phrase, "the checks which repress the superior power of "population, and keep its effects on a level with the means of subsistence, "are all resolvable into moral restraint, vice, and misery."§

The theory is as misleading in practice as it is defective in statement, and, as expressed, erroneous in fact. It assumes that the restraint of

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* See Journal of Statistical Society, Vol. xxxviii, pp. 74-6, and United States Census.

† There is a copy of the first edition (1798) in the library of the Statistical Society. It was published in 1798, the year after he was made a fellow of Jesus College, Cambridge, and when he was 32 years of age.

‡ p. 37.

§ 6th edition, Vol. I., p. 24.

population is the corner-stone of policy. Had this principle been accepted by the people, the population of the kingdom instead of amounting to thirty-two millions would have remained, as it was at the beginning of the century, sixteen millions. England, in the presence of the great continental states, would have been now a second-rate power; her dependencies must have been lost; her colonies have remained unpeopled; her industry crippled for want of hands; her commerce limited for want of ships. The legal insurance of the people by the land against death by starvation, the efforts to stem the tide of epidemics, the science of healing, hygienic improvement of every kind, must have languished under the cold shadow of this doctrine; and in its name the endeavour to save the lives of children by sanitary measures is even now denounced, as either futile or mischievous. And logically it leads to the policy of depopulation; for if increase causes misery, decrease, by parity of reasoning, causes happiness; this principle of population being the fewer the happier. It is a policy that diminishes the numbers of the wise and the good, but has no effect on the masses. Families under this policy die out. Classes, distinguished for any virtue, that accept the restraint under vows, provide for its extinction. The hermits and saints, that forewent "wedded love," and children, at the same time that they provided for their own eternal bliss provided for the extinction of sanctity on earth; while our universities offered by fellowships, forfeited on marriage, one of which Malthus had just acquired at Jesus College, a premium on protracted celibacy, they discouraged the multiplication of their ablest men.* The economists, the misers, the philosophers, in the same way eliminate prudence, acquisitiveness, and science from the ranks of their race.† They are like flowers all bloom. Low pay makes the officers of the army and navy perforce Malthusians, and discourages the propagation of prowess. Few aristocracies are self-sustaining; and if there is a natural tendency in wealth to accumulate by intermarriage, that may lead to its dispersion.

The state of nations in the present day, and the history of past ages, prove that the maintenance of equilibrium between subsistence and population is a complicated question. It has been left hitherto to the sense of both sexes. Malthus had the merit of contending that it admitted of scientific investigation; that its problems should be sought in the statistics of nations in every stage of civilization; that it entered into the national policy, inasmuch as it was a matter that concerned, in the highest degree, not only particular individuals, but the whole community, the State. Reduce the constituent roll of a nation too low, and it cannot struggle with success against other forms of life in nature; it cannot hold its own in the face of other powers; it can undertake no great concerted operations; solitary minds in remote dwellings are not quickened by

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* In 1797. See Memoir in Principles of Political Economy, 2nd edition, p. xxxv.

† The following is characteristic. D'Alembert had learnt that Lagrange, the Newton of France, had just married a relation; and thus wrote to Berlin:[1]

"J'apprends, lui écrit-il le 21 Septembre 1767, j'apprends que vous avez fait ce " qu'entre nous philosophes nous appelons le *saut périlleux* . . . Un grand mathé- " maticien doit, avant toutes choses, savoir calculer son bonheur. Je ne doute donc pas " qu'après avoir fait ce calcul, vous n'ayez trouvé pour solution le *mariage*."

Lagrange répond de cette étrange manière: "Je ne sais si j'ai bien ou mal calculé, ou, " plutôt, je crois n'avoir pas calculé du tout; car j'aurais peut-être fait comme *Leibnitz* " qui, à force de réfléchir, ne put jamais se déterminer. Je vous avouerai que je n'ai " jamais eu du goût pour le mariage . . . . mais les circonstances m'ont " décidé . . . à engager une de mes parentes . . . à venir prendre soin de moi " et de tout ce qui me regarde. Si je ne vous en ai pas fait part, c'est qu'il m'a paru " que la chose était si indifférente d'elle-même, qu'elle ne valait pas la peine de vous en " entretenir."

[1] Œuvres de Condorcet, publiées par A. Condorcet O'Connor, et M. F. Arago; vol. I., p. xcvi. The beauty, grace, and wit of Madam Condorcet extorted forgiveness even from the mother of the Duc de la Rochefoucauld, a most implacable foe of the marriage of the learned; on his marriage she went so far as to say to the Secretary of the Academy, *We forgive you: Nous vous pardonnons.*

collision with other minds; the quantity of life is lessened on the earth,* and the chances diminished of the rise of men of genius, to whom the world owes progress in the sciences, discoveries in the useful arts, and triumphs in fine art and literature.

Ill effects of too many people willing to work can for centuries only be felt when they are blindly crowded in particular spots, when their labour is not organized, when their acquisitions are insecure, when their dwellings are dens, and when the supply of subsistence is not rendered continuous, and within due limits equal, by storage, by commerce, by skilful distribution, and by wise laws: then zymotic disease is spread, periodic famines are fatal, and the wretched people are on inadequate diet starved.

The evils of indiscriminate intermarriage of imperfect natures accumulate. Errors on either side of excess or defect are punished as inexorably by the law of population as they are by the law of gravitation. If tribes of men will not breed domestic animals, or cultivate the soil, nothing can sustain them by the side of civilized races. If men and women will not work they may not eat. If classes of men drink alcohol to excess; if they consume impure water; if they herd in rookeries; and if they lead idle, criminal, vagabond lives; they perish. Nature is implacable; the degradation of the human race is made difficult; it is stopped by death. The best races in the end have the best chance of living from generation to generation. And against the severity of the life struggle have to be set the excitements of the battle, the energy it calls forth, and the perpetual selection of finer varieties of the race for survival. England through its centuries of history owes some of its greatness to this principle; it has been led by it step after step up to heights of glory.

The struggle is a consequence, science teaches, of the evolution of the living matter of the earth into higher forms; and that evolution is not yet at an end.

Mr. Darwin applies the doctrine of Malthus "to the whole vegetable "and animal kingdom"; and recognizing "the struggle for existence "amongst all organic beings throughout the world which inevitably "follows from the high geometrical ratio of their increase," he makes it the basis of a vast generalisation.† After discussing the question he thus concludes, "all that we can do is to keep steadily in mind that each "organic being is striving to increase in a geometrical ratio; that each "at some period of its life, during some season of the year, during each "generation or at intervals, has to struggle for life and to suffer great "destruction. When we reflect on this struggle we may console our-"selves with the full belief that the war of nature is not incessant, that "no fear is felt, that death is generally prompt, and that the vigorous, the "healthy, and the happy survive and multiply."

This struggle reigns over the whole animal kingdom; nor is man, as is too well known, an exception; but Mr. Darwin modifies the principle which ascribes the great check of population to "misery." Reason too gives man certain prerogatives; for as we have seen it controls fertility, thus adjusting in time and place the results to the infinite varieties of the openings in life, and further, in his humanity man has a protection against the casualties and misfortunes which overwhelm inferior species. The human family, the clan, the town, the tribe, the nation all acknowledge even now the claims of children, of the sick, of the wounded, and of the infirm, to help in time of trouble. Few men refuse to bind up the wounds of their fellow men.

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† Origin of Species, 3rd edition, Introduction, p. 4, p. 67, and p. 82.

8. *Progress of Mankind in Health.*

Turgot, Price, Priestly, Godwin, had written on the perfectibility of man, but Condorcet put this doctrine forward with new force in the remarkable work he wrote while he was under the ban of proscription in the last bloody days of the French Revolution.* Any Secretary of the French Academy of Sciences is not only distinguished by eminence in one branch of learning, but by a general acquaintance with the whole circle of the sciences; in writing on human perfectibility, Condorcet, therefore, did not write in ignorance. He knew the greatness of the conception; and had sounded all its depths. His argument is an induction drawn from the progress of nations through nine historical epochs in science, art, literature, and civilisation; and from the gradual rise to heights higher and higher, as well as from the intrinsic energy of their animating principle, he predicts in the last chapter not only an indefinite development of the sciences, of the arts, and of institutions, but of man himself in all his faculties. He foresees new discoveries in all the sciences, and in the arts, reacting on each other; improvements in the theory and practice of life; completing the faculties by placing more powerful instruments at their disposal; and by their own development. All classes by education, by free trade, by cheap law, by simpler manners, will be raised to a higher level; the classes dependent on labour, and men having a little capital, by insurance, and by co-operation, will enjoy advantages now only possessed by great capitalists. Progress will be accelerated by new methods in the sciences; by new notations; by the application of calculation to all branches of human affairs; and by simplifications of processes in the arts. Teaching both the sciences and the arts will be facilitated; men and women will alike cultivate the fields of nature. At present not a fiftieth part of the people endowed with talents obtain the education required for their development.

What Condorcet in 1794 sketched of the progress of the arts and sciences has already been fulfilled. The sketch was a prophecy. But he is equally confident that as plants and animals have been developed, so man, already richly endowed, is susceptible of organic perfectibility. The English and French are as much in advance of the Saxons and Franks as the cattle and horses of to-day are ahead of theirs. The senses will grow finer, the forces more vigorous, the intellectual faculties inconceivably superior to what is seen in the present average of the race; man may be indeed a "little "lower than the angels." Who can doubt, he asks, that the progress of *conservative medicine*,† the use of healthy aliment and lodging, a regimen which will develope energy by exercise without wasting it by excesses; the removal of the most potent causes of degradation, abject poverty and superfluous wealth; will prolong the lifetime of men, insure more constant health, and more robust constitutions. It is clear that conservative medicine, rendered more efficacious by reason and social institutions, must in the long run banish transmissible and contagious diseases, as well as maladies due to climate, diet, occupation; nay, the hope of relief may be extended to all other diseases whose remote causes may probably be recognised. Now, is it absurd to assume that this perfectibility of man will go on indefinitely through endless ages? So argued Condorcet. Malthus, to confute his doctrine, advanced the principle of population under which mankind multiplies, he contends, so fast in geometrical, while subsistence increases

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in arithmetical progression, that the numbers are necessarily kept down by "misery." This principle of population—the "wedded love" that Milton hailed—is the inexhaustible source of human wretchedness! The irony is terrible.

Condorcet, one of the eminent band of mathematicians then existing in France, would have smiled at the hypothesis that men increased in geometrical and subsistence in arithmetical progression, when it happens that the plants and animals on which men feed can all increase or decrease in geometrical progression at faster rates than man. The law is the same. He anticipated the objection from an indefinite increase, and suggested how it may be overcome.*

Mr. Darwin, accepting the law of the increase of animals in geometrical progression, instead of viewing it as a reason for an eternal stand-still of misery, traces to the consequent struggle for existence, and the survival of the fittest, the progressive development of creation from its lowest to its highest forms. He contends that living matter in the past was perfectible; and this is an argument for the indefinite perfectibility of men through future ages.

The great source of the misery of mankind is not their numbers, but their imperfections, and the want of control over the conditions in which they live. Without embarrassing ourselves with the difficulties the vast theories of life present, there is a definite task before us—to determine, from observation, the sources of health, and the direct causes of death in the two sexes at different ages and under different conditions. The exact determination of evils is the first step towards their remedies.

9. *Constituent Elements of the Population.*

The deaths in the ten years amounted to 55 hourly on an average, or to nine deaths every ten minutes;† but it is not so much with these deaths in themselves that the inquiry is concerned as with the numbers living at every moment of the decenniad. Upon the state of the twenty-one millions living the mortality depends; out of them the minutely death flows. Now the population increased; and this increase, which is a continuation of the process that has been going on for a century at variable rates, has produced large alterations in the proportions of the 21,389,245 living at different ages. This must be so. There were 7,636,233 births in the ten years 1861–70, of which the children under the age of ten enumerated at the beginning of 1871 were the survivors. But at the same census 507,522 persons of the age of 70-80 existed; and they were the survivors of the children born in the ten years 1791–1800, which, it is pretty certain, did not exceed 2,988,439 in number. Had the children born then been as many as in 1861–70, the living at 70–80 would have been raised in that proportion to 1,296,850. And so of other ages. The nature of the altered proportions will be seen in the Tables 68–71 at a glance. Now similar but not the same alterations in the proportions have taken place in every district of the kingdom. How can this difficulty in instituting just comparisons be obviated? ‡

As the mortality—and the fatal diseases—vary with age it is evident that the population and the deaths must be divided into a certain number of corresponding groups in order to determine the mortality and the fatal diseases of each group; we can then proceed to compare the rates of mortality and of disease in the several districts of the country. This has been done. In the Tables the mortality of males and females is shown in seventeen groups of ages.

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* Condorcet, Esquisse, pp. 362–4.

† The hourly births were 86; or 14 every ten minutes.

‡ See an instructive paper on "The Value of Death-rates; by Mr. Noel A. Humphreys."—Journal of Statistical Society, vol. xxxvii.

10. *The* Mortality *of* Males *and* Females *at the* several Periods of Life.

The vitality is measured either by the years of life out of which *one* death occurs, or by the death out of a *unit* of lifetime. Thus in England, according to the life table, 1 in 41 living dies annually. The death out of a unit of lifetime is ·02447. As this implies that 2·447 die in a year out of 100 living, the mortality is said to be 2·447 per cent. annually; or, to speak in round numbers, 24 in 1000. Make the numbers living constantly sustained 1000, then if 24 die in a year the mean interval between each death is 15 days; and if a death occur out of the 1000 every 24 days the rate of mortality will be retarded, as it is in inverse proportion to the interval between each death. The faster people die in a city the greater is its mortality. Thus any two of three variables being fixed the vitality is measured by the variation of the third.

For the *rate of mortality*—expressed briefly by *the mortality*—involves three elements—time, numbers living, numbers dying; the time being fixed at a year, and the living through that time at 1—which may be called a year of life—the rate of mortality is a fraction, easily convertible into a whole number by multiplying this fraction into 1000, or any greater number. Here the rate at different ages is expressed as the mortality of the living at those ages. Thus, taking the boys of England (1861–70) under five years of age in one group, it is found that the mortality was at the rate of 7·316 per cent. per annum; then boys of the age of 5 and under 10 die at the lower rate of ·815*; and boys of 10–15 as they enter puberty die at the still lower rate of ·446. In the next five years of age the mortality of youth rises; and at 20–25 the mortality is ·845, nearly the same as that of boys 15 years younger; through manhood the mortality rises slowly up to 3·300 at the age 55–65; and as age advances still more until at 85 and upwards it is at the rate of 31·357. The mortality of females goes through a similar cycle; descending to a minimum at the first great change of formative energy in puberty, and then ascending with age until subsiding life is converted into the other forces of nature. The law implies first an increasing and then a continually decreasing power of sustaining vitality.

But the law varies with the conditions of existence; and though these conditions vary infinitely—some being favourable and others unfavourable to life—there are large masses of the population, whole regions and cities, where the results of all the agencies in operation differ widely.

Take for example the group of 51 districts called Healthy for the sake of distinction, and here it is found that the annual mortality per cent. of boys under five years of age was 4·246, of girls 3·501. Turn to the district of Liverpool†: the mortality of boys was 14·475, of girls 13·429. Here it is evident that some pregnant exceptional causes of death are in operation in this second city of England. What are these causes? Do they admit of removal? If they do admit of removal, is this destruction of life to be allowed to go on indefinitely? It is found that of 10,000 children born alive in Liverpool 5396 live five years; a number that in the healthy districts could be provided by 6544 annual births. This procreation of children to perish so soon—the sufferings of the little victims—the sorrows and expenses of their parents—are as deplorable as they are wasteful. In Liverpool the death of children is so frequent and dreadful that a special

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* By a mere change of the place of the decimal point to the right this may of course be read as 8·15 per 1000.

† The *Borough* of Liverpool extends over a part of West Derby. The *District* is co-extensive with the *parish*.

system of insurance has been devised to provide them with coffins and burial ceremonies. The mother when she looks at her baby is asked to think of its death, and to provide by insurance not for its clothes but for its shroud and other cerements. There are cases where a wretched parent has insured the life of her baby, and realised money by the transaction; but there is no statistical evidence to show that this is a systematic trade; rather the reverse; all that is certain is that the children are bred in such unfavourable and unnatural conditions that they perish in excessive numbers. The extent to which the several causes contribute to their destruction requires further investigation; but enough is known to justify the belief that such causes may be to a considerable extent removed.

Then the sacrifice of the lives of men at the most productive ages, from 35 to 55, is almost equally great; the deaths out of the same numbers living are as *three* in the Liverpool district to every *one* in the natural state of the working population of extensive districts of the kingdom.

The thousands of families of the Liverpool district are of various grades, and live in very different sanitary conditions; some may be as healthy as groups of families anywhere else, and others may suffer to the extremest extent; but the general result is seen in the Table, which may for the moment represent the unhealthy classes, as the other Table represents the healthy classes, of the nation. Every great city has in it a bit of Liverpool. Between the extremes of mortality, high and low, lies a series of intermediate rates, and the aggregate of the whole mass is expressed in the rates for all England.

Table 50 exhibits the rates of mortality of males and females respectively, at 12 groups of ages, in London contrasted with the rates at the same groups of ages in 51 Healthy districts, in all England, in the district of Manchester, and in the district of Liverpool. Arranged in the order of mortality at all ages, as in the Table, it will be noted that London ranks next to all England, Manchester following, and Liverpool standing last with the high rate of 4·097 deaths per cent. of males and 3·636 of females.

If we take 15 great town districts in different parts of the kingdom—including Manchester—and compare the rates of mortality at different ages with the mortality at the same ages of the 17 great town districts, including, besides the 15 districts preceding, Liverpool and London, the rates will be found to differ but little, and that is through London being included in the 17 towns which contain on the average of the ten years 1861–71 no less than 4,981,258 inhabitants, or nearly a fourth of the population of England and Wales. The rates very fairly represent the death-tax which the great city populations of England now pay.

The causes that make the rates of mortality vary may be considered under two heads—

(1.) Causes inherent in the population itself, such, for example, as *sex* and *age*.

(2.) Causes outside the population, such as air, water, food, clothing, dwellings, or such groups of causes as are involved in residence, and relation of the several parts to each other in time and space.

Mere inspection of the Tables 49, 50, 51, establishes under the first head two things; (*a*) that the mortality of males everywhere exceeds the mortality of females at nearly all ages; (*b*) that the mortality is at a minimum at the age 10–15; and increases in two directions, as we approach birth, and as we recede to lengthening age.

Under the second head it is established by the facts that the mortality in all the great towns is high at nearly all ages; and also that the rates of mortality of the populations in mass under all the local conditions vary generally in the same direction as the mortality at their several periods of life. In fact the causes of insalubrity affect people of all ages; but it will be shown hereafter that their effects differ in degree at different ages.

11. *Effects of Density of Population on Health.*

The term town implies municipal government and industrial organization. But it will be convenient to discard for the moment every other consideration except the density of the population. This is shown by dividing the population by the square miles of area on which they are living. This has been done; and there is found to be a general relation between the mortality and the density of the population. Thus, in the healthy districts, during 1861–70 there were 166 persons to a square mile; in all England 367; in Liverpool 65,823. And this implies that the mean proximity of person to person in the three groups was 147, 99, and 7 yards; the proximity being as the square root of the density.*

The density of population as usually calculated assumes that the numbers are distributed evenly over the area; but this is scarcely ever the case; for the English towns and districts include open spaces unbuilt on, which conduce to the free aeration of the place, but in very different degrees. In some districts the greater part of the population is crowded on a portion, while the rest is thinly scattered over the remainder of their area. Thus the density of the population of London is expressed by 25,671 persons to a square mile; but the density of the Central districts is 107,729; of Westminster 153,976. In one sub-district of Westminster, Berwick Street, the density is 278,587, while in Hampstead it is 7315. The proximity in London is 11·8 yards; and of the densest sub-district of London (Berwick Street) 3·6 yards. The Manchester district besides the dense parts contains much open country. Upon the other hand, Liverpool, Birmingham, and Bristol districts comprise the densest parts of the towns of those names; the towns being more extensive. The local divisions of the kingdom have grown up; they are multiplied unnecessarily; they are so conflicting and the names are so confusing that it is difficult to use them without creating misapprehension. We may hope to see a remedy some day applied to this state of things. In the meantime the readers of the Registrar General's Reports will bear in mind, that *districts* conterminous with unions are referred to unless the contrary is stated.

In the years 1861–70 the population of an average district was 34,555; the annual births 1212; the deaths 775; the excess of births 437.

To investigate more exactly the relation between density of population and the mortality, which we know increases in some proportion to density, the districts have been grouped in the order of the mortality at all ages. The groups are eighteen; commencing with a mortality at 15, and ascending to 39.

The area, population, births, deaths, and mortality of each group have been determined; and are shown in the Tables. The irregularities that are encountered in dealing with single districts are in part effaced; and the general result is that in all the large groups the density and the mortality follow the same order.

In the Appendix to the Fifth Report I endeavoured to show that within certain limits there was a definite relation between density of population and mortality. And it was found that the mortality of districts did not increase as their density, but as the 6th root of their density. Thus the female mortality of St. James, Westminster, district was ·02145; its density was 145,059 persons to a square mile; the density of St. George Hanover-square being 39,018. What was the mortality? By calculation from the density it should have been ·0172, and it was ·0171.† The

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* p = proximity in yards = $\frac{\sqrt{2}}{\sqrt[4]{3}} \times \frac{1760}{\sqrt{D}}$ if D = population to a square mile.

† See Registrar General's Fifth Report, Appendix, pp. 420–424. The constitution of the above two districts has since been changed.

same relation existed between the mortality and the density of population in other districts of London.

A larger basis is now supplied by the facts of ten years recorded in all the districts of England and Wales. They have been arranged in the Tables; and with this result, that in every group the mortality increases with the density, but happily not in the direct proportion of the density. London has been excluded in the following calculations. Thus in the 345 districts with a mortality of 19·2 the density was 186 persons to a square mile; in the 9 districts with a density of 4499 what was the mortality? In the first place it was not expressed by the proportion $186 : 4499 :: 19{\cdot}2 : x$ but by this proportion nearly

$$(186)^{0{\cdot}12} : (4499)^{0{\cdot}12} :: 19{\cdot}2 : x = 28{\cdot}1$$

Table 48 shows in a comparative view the actual and the calculated mortality.

The districts being grouped in the order of the mortality the density of population is always found to increase with the mortality, but more rapidly. The greater the proximity of man to man the greater is the mortality. To show how far the effect of the causes of mortality varies in dense and open districts at different ages in the two sexes the following Tables have been framed. The 593 districts are arranged in seven groups; under which the mortality of males and females is given at 12 ages. Only the London districts have been excluded, and that on account of the difficulty of distributing the deaths at different ages in hospitals over the districts to which they properly belong.

The mortality per 1000 *under* the age of *five years* is in the seven groups—

No. of group - -	I.	II.	III.	IV.	V.	VI.	VII.
For females - - -	34	44	58	76	89	106 and	134
„ males - - -	41	51	68	88	101	118 and	145
Excessive mortality of males -	7	7	10	12	12	12	11
Mean of males and females -	38	48	63	82	95	112	140

It will be noticed that the groups are numbered in the order of their density, No. I. being the least dense and No. VII. the most dense.

After examining the mortality at the various ages in the seven groups of different densities, this general law may be deduced from the facts. As the mortality of males and females increases at all ages with the density of population, so it increases at every group of ages, but in very different proportions; most in early childhood (0–5); least at the two quinquennial ages 15–20 and 20-25, when immigrants enter towns; another maximum being attained at the ages 45–65, immediately after reproduction ceases. At the ages of 65 and upwards the effect of density in increasing the mortality diminishes. The effect is not considerable at any age after 35 in the 345 districts (group II), having a density of 186 persons to a square mile; there the chief effect is produced in childhood.

In the 137 districts, having a density of 379, the effect of density after the age of 15 remains nearly uniform, and increases the mortality by about one-fifth part.

In the 47 districts, having a density of 1718, the mortality is doubled in childhood; and is raised by about a half at the ages 45–65.

London, though with a density of 25,671 persons to a square mile, follows for childhood the same law as the 47 districts; the mortality is doubled; then at the ages 45–65 it is still higher than in the 47 districts, for the mortality being increased by nearly three-fourths approaches the mortality of the 9 districts. But London presents this exceptional fact; the mortality at the ages 15–20 and 20–25 is below the mortality in the healthiest districts. The cause of this will be discussed hereafter.

The Table 52 shows, in a comparative view, how differently the various causes of mortality operate at different ages in the eight groups of districts. This is mainly due to the varying powers of resistance.

The exposure of children, of men and women in the prime of life, and of old people to causes of death, varies in different circumstances; but it is evident, after every allowance has been made, that the power of resisting the noxious influences at work in the thickest peopled districts is greatest at puberty, least in childhood and in manhood.

The Table 53 shows this more clearly; for it shows at each age out of what numbers living there are 100 deaths in the healthy districts; and then in other columns how many die in the seven other groups of districts out of the same numbers living. Thus to 10,050 persons living of the age of 35–45 only 100 die annually in the healthy districts; and 104, 121, 132, 162, 214, and 272 in six other groups of districts. In London the deaths out of the same numbers are 151.

The Table 54 shows that the female children with a lower absolute mortality than males under five years of age suffer relatively in every group more than males in the denser districts. At 5–10 the mortality of males is but slightly in excess and at all other ages the males are the greatest sufferers from the unsanitary conditions. Their occupations come into play.

12. *Mortality of Persons of different Ages as a Sanitary Test.*

In judging of the effect of destructive agents in particular districts it is well to take into account the mortality at the several ages in the two sexes. The occupations of men have a certain influence on their mortality. This is the case for instance with miners, with publicans, and with men in some dusty occupations. The influence is not felt in the case of young children, and the occupations of women vary less than those of men; but young children are differently fed or nursed in different parts of the country, and women in service who work and are well fed interfere with the female mortality, so that it is the safer course not to depend on any one age or sex, but to take the mortality at all the several ages of both sexes into account. Then the displacements of deaths by removal of the sick to hospitals or workhouses can also be taken into account by the local inquirers.

13. *Districts grouped in the Order of Density.*

In a previous paragraph the districts were grouped according to the order of their mortality; it may be interesting now to group them in the order of the density of population. This being done it is found, as has been shown, that on instituting a comparison between the two arrangements, the groups of districts of highest mortality are the densest, but that the least dense districts have not always the lowest rates of mortality. Nor should this be expected. For the maximum of advantages in country districts being once attained further isolation is a disadvantage. The insalubrity of marshes and forests can only be subdued by numbers; and the country parts thinly peopled must have been much less salubrious in ancient than in modern times. The notes following Table 55 will throw light on the peculiarities of some of the least populous districts.

14. *Of what Causes people die off at different Ages.*

The English Life Table shows how many of a million children born are males, and how many are females; how many of each sex will probably survive year by year until after the age of 100 years the last life is extinguished; how many die in each year of age; and the mean after-lifetime at every age.

The English Life Table is constructed on the numbers enumerated at 12 periods of life in the two censuses of 1841 and 1851; and the deaths registered at the corresponding ages in the 17 years 1838–54*; since those dates two more censuses having been taken, and the deaths registered and abstracted at the several ages down to 1872, I thought that it might be desirable to construct a new Life Table on the basis of the more extended experience. But the mortality at the several ages having been calculated for each of the 34 years 1838–71, the mean of the rates was found to agree so closely with the mean rates on which the Life Table was based that a new construction became unnecessary. The law of mortality had fluctuated from year to year, but had as yet remained constant; so that the persistence of the force of death as it affects different ages is beyond doubt.

Annual Mortality PER CENT. of **Males** and **Females** in **England and Wales.**

Ages.	Males.		Females.		Ages.
	1838–54. (17 Years.)	1838–71. (34 Years.)	1838–54. (17 Years.)	1838–71. (34 Years.)	
All Ages	2·33	2·33	2·17	2·15	All Ages.
0—	7·25	7·26	6·23	6·27	0—
5—	·92	·87	·91	·85	5—
10—	·52	·49	·54	·50	10—
15—	·82	·78	·85	·80	15—
25—	1·00	·99	1·06	1·01	25—
35—	1·28	1·30	1·27	1·28	35—
45—	1·85	1·85	1·59	1·56	45—
55—	3·18	3·20	2·82	2·80	55—
65—	6·69	6·71	6·00	5·89	65—
75—	14·76	14·71	13·44	13·43	75—
85—	30·14	30·55	27·92	27·95	85—
95 & upwards	44·03	44·11	43·22	43·04	95 & upwards.

Note.—The Table may be read thus:—Of males of the age 25 and under 35 the rate of mortality *per cent.* was 1·00 in 17 years 1838–54; and ·99 in 34 years 1838–71, and so for other ages. The rates of mortality for 1838–54 are taken from the English Life Table, p. xx; the rates for 1838–71 are the arithmetical means of the several rates for each of the 34 years, as shown in Tables 21–4, pp. lxxx–iii. of the Registrar General's 34th Annual Report.

The Life Table thus gives out of 1,000,000 liveborn children the deaths at each year of age. To determine all the diseases of which they die at each year of age involves an amount of labour beyond our command, if the whole of the distinguishable diseases recorded are taken into account. To reduce the arithmetical labour within an available compass, I have selected certain diseases of which the diagnosis is most certain. The other diseases are thrown into *groups:* the first *group* of all the class of zymotic diseases of the first order not separately dealt with; the second *group* of all except the distinguished maladies. And the several local diseases are grouped according to the affected organs. Suicide and other violent deaths are given in two lines.

The construction of the Tables 7–15 may be thus described. A separate set of Tables was formed for males and females, and the numbers dying at each period of life were taken from the Life Table. The deaths are numerous at first, and the numbers in each of the first five years of age are distinguished; then the numbers dying in the quinquenniads 5 to 10, 10 to 15, 15 to 20, 20 to 25; and finally the numbers dying in the decenniads 25 to 35, 35 to 45, and so on to the end of life.

* See Life Table, pp. xviii–xix; Longman, 1864.

From the returns of deaths in 1861–70 by different causes in the same divisions of age, the proportions of males per 1,000,000 dying of each of the 25 diseases or groups of diseases at each division of life were determined. For the deaths according to age and sex in the preceding 10 years 1851–60 the same process was repeated; and from the mean of the results of the two decenniads the final Table was derived, which served to distribute the deaths of the males of the Life Table proportionally.*

Thus to take an example, in the years 1861–70 the deaths of males at ages 25–35 were 147,734; the deaths of males by small-pox 2037, by fever 10,513; so the proportion to 1,000,000 deaths at those ages was for small-pox 13,788, for fever 71,162. The corresponding proportions in 1851–60 were for small-pox 12,473, for fever 70,266; the mean for the twenty years was for small-pox 13,130, for fever 70,714. Now, by the Life Table the total deaths of males at ages 25–35 are 30,592; so the numbers due to small-pox are 402, to fever 2163; which accordingly find their places in the Table. The other groups of causes were treated in the same way. From the separate Tables of males and females the Tables of persons of both sexes were framed by addition.

Knowing the deaths from each disease at each age period, the sum of all deaths from the same disease at and after each age are obtained by successive additions. Thus Table 12 was constructed from Table 7.

The Table to be complete should give the deaths from each cause in each year of age; but that series is long, and as it can be obtained by interpolation, I reserve it for a subsequent process.

It will be observed by the Table 12 that out of 1,000,000 children 114,417 will die of phthisis. Assume for a moment that at any age the survivors of the 114,417 may be picked out at that age and thrown into a class apart, then a table of the consumptive could be constructed showing their chances of dying at each age, as well as the premium to pay for an insurance on their lives.

Practically it is not possible to select out of a number of persons taken indiscriminately the numbers that will die of consumption; but it is considered possible by taking ancestral descent, temperament, and premonitory symptoms—such as hæmoptysis—into account, to select a class apart, having what is technically called a consumptive tendency, and whose mortality would approximate to that of the persons actually dying of consumption.

And a Life Table of the class dying of consumption can be formed by summing up the deaths by consumption in the Life Table, as in the subjoined example, which might be completed by interpolation.

Numbers to die of Consumption at and after each Age out of 1,000,000 Children born.

Age x.	To die.	Age x.	To die.
0	114,417	35	54,290
5	109,948	45	31,886
10	107,809	55	15,418
15	104,283	65	4,973
20	95,209	75	679
25	81,424	85	52

* See Table 6.

15. *March of an* English Generation *through* Life.

It is possible, by means of Tables so constructed, to follow any large number of people through the whole of their ages, and to point out the casualties under which they will probably succumb.

Age 0–5. The first thing to observe is, that the fatality children encounter is primarily due to the changes in themselves. Thus 1,000,000 children just born are alive, but some of them have been born prematurely; they are feeble; they are unfinished; the molecules and fibres of brain, muscle, bone are loosely strung together; the heart and the blood, on which life depends, have undergone a complete revolution; the lungs are only just called into play. The baby is helpless; for his food and all his wants he depends on others. It is not surprising then that a certain number of infants should die; but in England the actual deaths in the first year of age are 149,493, including premature births, deaths by debility and atrophy; diseases of the nervous system 30,637, and of the respiratory organs 21,995. To convulsions, diarrhœa, pneumonia, bronchitis, chiefly their deaths are ascribed; little is positively known; and this implies little more than that the brain and spinal marrow, nerves, muscles, lungs, and bowels fail to execute their functions with the exact rhythm of life. The first two are said by pathologists to be often rather symptoms of diseases unknown than diseases in themselves. The total dying by miasmatic diseases is 31,266; but it is quite possible that several of the children dying of convulsions die in the early stages of some unrevealed zymotic disease, whose symptoms have not had time for development. Convulsion is a frequent precursor in children of measles, whooping-cough, scarlet fever, fever; indeed Dr. C. B. Radcliffe well remarks "in the fevers of infancy and early childhood, especially in the "exanthematous forms of these disorders, convulsion not unfrequently "takes the place occupied by rigor in the fevers of youth and riper years."* Many of the cases of pneumonia may also in like manner be whooping-coughs and other latent zymotic diseases. In the second year of life pneumonia, bronchitis, and convulsions are still the prevalent, and most fatal diseases; many also die then of measles, whooping-cough, scarlatina, and diarrhœa. Scarlet fever asserts its supremacy in the second, third, fourth, and fifth years of age. Whooping-cough is at its maximum in the first year, measles in the second, scarlatina in the third and fourth years. Thus these diseases take up their attacks on life in succession and follow it onwards.

The deaths from all causes under the age of five years are 263,182. The number ascribed to infanticide is very few; but the deaths by suffocation (overlaying, &c.) are more numerous; and so are the deaths directly referred to the "want of breast-milk." The total deaths by burns, injuries, drowning, and all other kinds of violence are 5175.

By a physiological law 511,745 boys are born in England to 488,255 girls; and by another law 141,387 boys and 121,795 girls die in the first five years of life; so that at the end of five years the original disparity in the numbers of the two sexes is so much reduced that at the age of five years the boys only slightly exceed the girls in number. The greater mortality of boys is due to difference of organisation, for the external conditions are substantially the same in which boys and girls are placed.

Great as is the influence of organisation itself, the difference of external circumstances and sanitary condition exercise a very real influence on life, disease, and death in childhood.

Thus, even in the Healthy districts of the country, out of 1,000,000 born, 175,410 children die in the first five years of life; but in Liverpool

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* A system of Medicine by Reynolds, vol. 2, p. 593. Article on Diseases of Spinal Cord.

District, which serves to represent the most unfavourable sanitary conditions, out of the same number born, 460,370, nearly half the number born, die in the five years following their birth. This is 284,960 in excess of the deaths in the Healthy Districts.

Out of 1,000,000 Children Born alive (1) in the **Healthy Districts**, (2) in **All England**, and (3) in the District of **Liverpool**, the **Numbers dying** under **Five Years of Age** by Nineteen Groups of **Causes.**

——	Healthy Districts.	England.	Liverpool District.
Deaths from All Causes - -	175,410	263,182	460,370
Total Zymotic Diseases - -	49,761	87,099	171,009
Small-pox - - - - - - -	602	3,331	5,175
Measles - - - - - - - -	5,257	11,507	25,514
Scarlatina - - - - - - -	11,373	17,959	26,818
Diphtheria - - - - - - -	4,184	2,425	3,395
Whooping-cough - - - - -	9,650	14,424	32,551
Typhus (with Enteric and Common Fever) - - - - - - -	2,807	5,401	9,297
Diarrhœa and Dysentery - - -	9,354	20,344	51,911
Cholera - - - - - - - -	399	1,129	4,255
Other Zymotic Diseases - - -	6,135	10,579	12,093
Cancer - - - - - - - -	110	71	62
Scrofula and Tabes - - - -	5,335	8,115	11,694
Phthisis - - - - - - -	2,656	4,469	5,116
Hydrocephalus - - - - -	6,604	9,296	14,972
Diseases of the Brain - - - -	22,692	40,065	49,840
Diseases of the Heart, and Dropsy -	1,304	1,507	2,093
Diseases of the Lungs - - - -	27,884	41,476	79,893
Diseases of the Stomach and Liver -	4,431	4,778	4,874
Violent Deaths - - - - -	4,232	5,175	17,107
Other Causes - - - - -	50,401	61,131	103,765

The above Table shows how many children die from the several groups of causes (1) in the healthy districts, (2) in all England, and (3) in the Liverpool District. There is a greater increase in Liverpool from small-pox and measles than from scarlet fever; and diphtheria was more fatal in the healthy districts than in all England. Diarrhœa and cholera were greatly aggravated in the other districts of England; so were whooping-cough, and typhus, under which were registered typhus, typhoid, infantile remittent, and relapsing fever. The diseases of the lungs are more fatal to children in Liverpool than diseases of the brain.

The children of Norway fare better than the children of sunny Italy; to which it may well be still an *officina gentium*. Out of 100 children born alive the deaths in the first five years of life are in Norway 17, Denmark 20, Sweden 20, England 26, Belgium 27, France 29, Prussia 32, Holland 33, Austria 36, Spain 36, Russia 38, Italy 39. Russia is almost as fatal to her children as Italy.

In a paper* read before the Statistical Society the methods of determining the rates of mortality were described, and I collected information as to the treatment and management of children in Scotland, Norway,

* Mortality of Children in the Principal States of Europe, in the Journal of Statistical Society, vol. xxix., pp. 1–35.

Sweden, France, and Austria. The subject was taken up in England by the Obstetrical Society, who published an able report, based on returns, on the birth and treatment of English children.* I have not yet received papers from Russia or Italy.

The mortality of infants evidently depends, to some extent, on the midwifery of a country; on the way the children are fed by the mothers; on the water; and on the cleanliness observed, as well as the other sanitary conditions.

Age 5–10. Our young travellers now enter on their *sixth year* of life. They have left great numbers on the way. And nearly every one of the 736,818 survivors has been attacked by one disease or another; some by several diseases in succession. There is one fact in their favour: the majority of the zymotic diseases rarely recur. Each renders the body insusceptible of injury from diseases of its own kind, though not from other diseases. Medicine † is still without any accurate determination of the numbers attacked to every death, but it is evident from the deaths that some hundreds of thousands of the survivors have had whooping-cough, measles, scarlet fever. Taking advantage of the non-recurrent law, Jenner, by his immortal discovery, substituted small-pox modified and mild for natural small-pox; and it is probable that the greater part of all the children at the age of five are vaccinated, or have had small-pox.

So the total deaths in the five years following are 34,309; 8743 of them from scarlatina, the principal plague of this age, 1364 from diptheria, 4036 from fever: more than half of the deaths in this young age, are from miasmatic disease, in all 19,256. The brain and lung diseases levy also a certain tribute.

Age 10–15. But 702,509 survive and enter on this age, which culminates in puberty; and 684,563 pass through it into the next at the age of 15; for the deaths are fewer than at any other age. They amount to 17,946, of which 1901 are by scarlatina, 2842 by fever, 3526 by phthisis, these last two diseases already standing as the most deadly; in this period the change in girls is greater than the change in boys, and rather more of them die.

Age 15–20. Now the mortality increases especially among women, of whom 5263 die of consumption (phthisis), and 244 of childbirth, for at this age a few young girls marry with some risk to their lives. The tight ligatures that are so often and so unwisely placed round the waist interfere with respiration; and may, with their in-door life, favour the development of phthisis. The deaths of males by consumption are 3811, by fever 1368: the deaths from both diseases being fewer than the deaths of females from the same causes. The violent deaths of 1387 males, against 193 females, go a long way towards redressing the inequality.

Melancholy suicide appears now among the causes of death; indeed 14 such deaths appear before the age of 15, but the numbers in this age amount to 94, of whom 46 are males, 48 are females. Insanity looms on the horizon, and there is an excess of fatal brain affections over affections either of the heart or lungs.

Age 20–25. At this age large numbers marry. The deaths are 28,705, of which nearly half, or no less than 13,785, are by phthisis. Fever is associated with it, as the great prevailing zymotic disease; the reign of the other zymoses of the young is almost over. The brain, heart, and lung begin again to suffer, and of their diseases more die. 1100 women die in childbirth.

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* Republished in the Appendix to the Registrar General's 34th Report, pp. 225–9.

† It is to be regretted that many of the writers in a recent system of medicine have failed to follow the advice of M. Louis; they have not counted, and the student gains no light from the numerical method.

If it is the age of love it is also the age of war, of dangerous work, and of crime: the violent deaths, exclusive of suicides, are 1677, without reckoning any death in foreign war.

Age 25–35. Of the million, 634,045 attain the age of 25, and 571,993 live to the age of 35. The period extends over double the time hitherto handled. It is the athletic, the poetic age: it is the prime of life: two thirds of the women are married; and now at its close is the mean of the period (33–34) when hubands become fathers, wives become mothers, the new generation is put forth. The deaths are separations; they leave widows and fatherless children behind. Of the 62,052 that die, 30,592 are men, 31,460 women; 2992 of the men, and only 309 of the women die by violence, suicide excepted; but 2901 women die in childbirth.

Consumption is the most fatal disease of the age; it is the cause of 27,134 deaths; women suffering more than men. Fever is fatal to fewer lives than it was earlier; but it is by far the most fatal of the zymotic diseases, and slays its 4197.

The local diseases of lungs, heart, and brain grow intenser in this period.

We may now look back to the fate of a generation exposed to unfavourable conditions; such, for instance, as prevailed in the Liverpool District. There, of a million born, less than half, only 434,497, live to the age of 25; then 74,153 die in the ten years, leaving 360,344 alive at the age of 35. No less than 10,657 die of fever, 333 of suicide, 4850 of other violent deaths. The local diseases are exceedingly fatal; 1938 mothers die in childbirth.

In happier sanitary conditions 727,552 live to the age of 25, and 667,940 survive the age of 35. Only 3116 die of fever, 396 of suicide, and 2819 of other violent deaths.

Age 35–45. The losses are of 69,078 lives; 35,142 men, 33,936 women. The athletic age is now over; but the combined faculties of muscular and nervous energy are at their height. Women have borne more than half of their children, now they bear the rest. It is the age of fathers and mothers; criminality declines. Many of the structures now give way. Phthisis still predominates; fever snatches still its many victims; and the brain, heart, lungs, and bowels become more and more the seats of destructive disease. 564 persons commit suicide; 3280 die violent deaths, 2907 of them men, and 373 women; 2516 mothers die in childbirth.

While the deaths by fever are 3777 out of 571,993 attaining this age in England; 14,322 people die of it in the Liverpool District out of 360,344. The lung diseases in the two sets of conditions are fatal to 7452 and 13,967 lives.

In the healthy districts the deaths by fever are 2702, by diseases of the lungs 5261.

Age 45–55. This age is the middle arch of life: *nel mezzo del cammin di nostra vita,** for the million are reduced to half a million lives, a few months after the age of 45. They have produced the succeeding generation. The age of fertility is now nearly over in women; but a few lingerers bear children, and in the act 160 die. The deaths by all causes are 81,800; by fever 3749; diarrhœa, dysentery, and cholera 1944; by phthisis 16,468; by lung diseases 13,203, heart diseases and dropsy 10,041, brain diseases 9313, bowel and liver diseases 7917. The centres of life are sources of death. At this age, in their wretchedness, and in their weakness, 599 men, 204 women, in all 803, appeal rashly to the "arbitrator of despairs, just death." 2876 men, 478 women, in all 3354 persons, die violent deaths.

Cancer, a formidable and dread disease that began to be fatal before, now destroys 4583 lives, 1140 men, 3443 women.

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* Dante: Divina Comedia, Inferno, Canto 1.

In unfavourable sanitary conditions out of a million lives in Liverpool, only 275,193 attain the age of 45, and 90,969 die in the following ten years; 12,504 of fever, 13,274 of phthisis, 24,417 of pulmonary diseases, 420 of suicide, and 4314 of other violent deaths.

In the Healthy districts of the country 606,019 attain the age of 45, and 71,938 die in the ten years following; 2306 by fever, 13,745 by phthisis, 10,012 by brain diseases, 10,451 by heart diseases and dropsy, 8234 by pulmonary diseases, 1022 by suicide, and 3030 by other violent deaths.

Age 55 and upwards. To the age of 55, near the middle of the possible lifetime of humanity in its present state, 421,115 attain; and from this point of time it is possible to look ahead, and discover the particular rocks, foes, collisions, tempests to be encountered, to be dreaded, or to be weathered by the fleet on its way to the utmost butt of existence, "the very seamark of its journey's end."

One thing to remark is, that the rate, the degree of danger, which has hitherto increased slowly, now increases at so much faster a pace, that although the number of lives grows less, the number of deaths increases in every one of the next 20 years, and is afterwards sustained for 10 years longer, until at last in the distance the living all sink into the elements from which they came.

Few will die of the non-recurrent zymotic diseases; some 29,803 in all will die of fever, diarrhœa, cholera, rheumatism, and other zymotic diseases; cancer will carry off almost as many as phthisis; the greatest mortality, however, will be experienced from diseases of the lungs; then will follow in their wake of destruction brain affections, apoplexies, paralysies; heart and artery diseases, often the remote cause of the other maladies, bowel and liver diseases, kidney diseases; many will still die violent deaths as they are less able to resist injuries than younger lives. Gout and intemperance will reap their later harvest; so will mortification, atrophy, debility, and the infirmities of old age: then comes the end.

Of 100 women living of the age of 55 and upwards, it is worthy of note that 11 are spinsters, 43 widows, and 46 wives; of 100 men 9 are bachelors, 24 widowers, 67 husbands. We now pass to the particular decenniads of life.

Age 55–65. The number of males and females surviving becomes equal at the age of 53, but at and after 55 the women exceed the men in number, as their mortality-rate is lower ever after the age of 39. While 421,115 of both sexes enter this stage of life, 309,029 live on to the next; 112,086 die; only 9795 of fever, diarrhœa, dysentery, cholera, rheumatism, and other zymotic diseases. Cancer kills 5998 persons, 4035 of these women; consumption 10,445: the diseases most to be dreaded, and guarded against, especially by men, are affections of the lungs, and heart, of which 23,659 and 17,081 persons die: diseases of the brain are fatal to 15,678, of the stomach, intestines, and liver are fatal to 11,400. The vigour of life is somewhat subsiding; family cares perhaps accumulate, ambition is disappointed, and the mind sometimes gives way organically: the tendency to suicide is greatest at this age, and the greatest number of lives, 826, come to that melancholy close in this period. But 3155 are killed by violent deaths of various kinds; 2560 men, 595 women.

Age 65–75. 309,029 enter this age, and 161,124 leave it alive: 67 years is near the mean date at which their children give birth to their grand-children; the third generation. The 147,905 dying in this period succumb to the same classes of disease as were fatal in the previous decenniad; and still more succumb to lesions of the brain and heart, and lungs: the kidneys give way, but are never so fatal as affections of the higher organs. 11,256 of the deaths are from fever, diarrhœa, cholera, rheumatism, and other diseases of the miasmatic order; 9789 from five constitutional diseases; 92,391 from diseases of brain, heart, lungs, and other local

organs; 3064 from violence, and there remain 31,405 referable in great part to a new head in the developmental class, *old age.*

The year of age 72 is that in which the greatest number of *men* die; and which may have led the psalmist to say, the days of the years of our life are three score years and ten; but these are "days passed away in thy wrath," in violation of the divine laws, and therefore are not necessarily the limit of healthy existence where the laws of life are observed.

Age 75–85. The numbers that enter this decenniad are 161,124, and the numbers that leave it alive are 38,565. More than half the numbers living have been married and are widowed. The 122,559 that die of recognised diseases at this age die chiefly of lung, brain, heart, and other local diseases; against such dangers they have to guard themselves. The number of such deaths is 51,838; then some 7229 persons die of miasmatic diseases; 131 of suicide, 1691 of violence. The cold weather is their great foe. But there remain 58,905 dying chiefly of atrophy, debility, and *old age.*

Age 85—to the end. The 38,565 aged pilgrims are no longer what they were; their strength is fading away, and they succumb to slight injuries, to cold, heat, want, or attacks which in their early years would have been shaken off: only 2153 live to the age of 95; and 223 to 100; finally by this Table at the age of 108 one solitary life dies.

Of what causes do they all die? Diseases grow again as obscure as they were in infancy; zymotic diseases, constitutional diseases scarcely appear; the diseases of the lungs and brain are the most conspicuous among the local diseases; 509 die of violent deaths, including suicides. These causes account for the end of 10,659, leaving 27,906 that die chiefly of *old age*—of what has been called natural death.

Majendie pointed out to me at Saltpetrière, the hospital for old people in Paris, that the deaths apparently from no cause, were often the result of pneumonia, or consolidation of the lungs, which in the absence of the ordinary symptoms could be detected before death by dulness of the chest on percussion. Hippocrates had noted that the symptoms of diseases grew obscure in advanced age. And this must be so. The symptoms of disease—including pain itself—require strength for their manifestation; without it reaction is scarcely appreciable; and many diseases in the old as well as in the young are so insidious as to escape detection. But upon the other hand many deaths due to debility are ascribed to specific diseases. And beyond doubt thousands do die of old age; thousands of the generation, like the patriarchs of old, fall asleep. As the body with all its parts is undergoing continual renewal, it grows, gets consciousness, develops strength for years, and then all its powers insensibly decline, until the daily alternations from wakefulness to sleep of which life is made up cease; and it is all sleep; the life exhales in the arms of friends, or alone in the night like a light goes out. This last end is the natural death to which, as Bacon says, it is the office of the physician, of the state physician we say, to conduct the nation. "For it is no small felicity which Augustus "Cæsar was wont to wish to himself, that same *Euthanasia*; and which "was specially noted in the death of Antoninus Pius, whose death was "after the fashion and semblance of a kindly and pleasant sleep." *

Such and so various are the settings of Forty million, eight hundred and fifty-eight thousand, one hundred and eighty-four years of English life.†

16. *Future* Dangers *at several* Stages *of* Life.

A series of Tables shows of what causes people die *after* twelve stages of life. And they answer such questions as follow:

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* Bacon's Advancement of Learning. Book ii. x, 7.

† Soles occidere et redire possint. Philosophy does not accept the poet's sequel, as our substance, as well as its animating force, is as imperishable as the Sun's.

Of what cause is a child just born most likely to die? Of some local disease in the present state of England, for of 1,000,000 born 424,480 will die of specific diseases of parts of the body; the breath organs standing first in the list of fatality. The miasmatic diseases will carry off about 175,619; fever, diarrhœa, scarlatina standing foremost among the destroyers. After them come whooping-cough and measles. Small-pox will be fatal to 6521.

At the age of 15 the zymotic diseases, having already destroyed 112,910 children, have only 62,709 victims left. Of 684,563 living to the age, phthisis will carry off 104,283 lives, and nearly half of them in the next 20 years: it is the single disease most to be apprehended. In these years also 4245 will probably die of childbirth.

At the age 35 lives are most frequently insured: the 571,993 here remaining will die chiefly of lung, brain, heart, bowel, urinary, and other local diseases: of consumption; of cancer; of fever, diarrhœa, cholera; and of violent deaths. Of women 2676 remain to die of childbirth.

The numbers to die after every successive 10 years are given, and the deaths for intermediate years can easily be interpolated. Thus the probability at any age of dying before, at, or after any future age can be conveniently determined from the Table by a few mathematical formulas, with which it is not necessary to embarrass the general reader, as to him it is believed the Tables as they stand will be perfectly intelligible. (See Tables 7–15.).

It is very instructive to compare the facts of the Table for all England with those for the Healthy districts and for Liverpool (Tables 16–30).

For example, by the Table of Healthy districts of 1,000,000 children born, 667,940 live to the age of 35, and 12,233 of them afterwards die of fever: by the Liverpool Table out of the same number born only 360,344 live to the age of 35; of these 39,932 afterwards die of fever (typhus, typhia, and typhinia), and as many as 14,322 die before attaining the age of 45.

17. *The relative number of Deaths from different Causes.*

The degree in which the causes of death operate at different ages is shown by the series of Tables 4–6: showing to 1,000,000 deaths at each age, the proportional numbers by different causes. There are three sets of Tables, two for the males and the females in each of the two decenniads 1851–60 and 1861–70; and one for the 20 years 1851–70. The changes in the two periods can here be studied. It will be noticed that in the third, fourth, and fifth years of childhood, scarlatina is the most dangerous of all diseases; it causes more than a fourth part of all the deaths in the fifth year: next to it stands disease of lungs.

Turning to the age 20–25, nearly half the deaths are by consumption; and the same disease maintains its ascendency with little diminution up to the age 35.

18. *The Rates of Mortality at different Ages by different Causes.*

The rates of mortality have generally in this volume, in continuation of the previous one, been expressed in per-centages with three decimals; and it has been found that the rate per 1000, that is the deaths to 1000 living, through a year is convenient, where the mortality has to be expressed from all causes without decimals. But neither the rate per 100 nor the rate per 1000 is suitable to the expresion of the rate of mortality by causes differing so much in intensity as those to be dealt with; hence to secure clearness and avoid decimals altogether, the important Tables (2–3) show the deaths to a million living at each age-period by the different causes.

In the procession of a generation through life the deaths were given in different periods out of diminishing numbers living; the deaths from all

causes being taken as a basis, it was easy to show in the previous set of Tables the proportional number from the several causes. It remains to show in a Table the rates of mortality by different causes, in the different sections of the population divided by sex and age, in the two decennial periods.

It will be noticed that the mortality of the first three quinquenniads of age declines rapidly; for males from 73,162 at the age 0–5, to 4460 at the age 10–15; and then it increases to 6161 at age 15–20, to 19,165 at age 45–55, and so on to the end. Being in juxta-position the rates of mortality from the diverse causes in both sexes can be readily compared.

Thus at the age 25–35 the rate of mortality from phthisis was in the two decenniads among males 4034 and 4092: among females 4575 and 4378, this sex being the greatest sufferer from consumption at the period of life when in the same decenniads the rates from metria and childbirth were 886 and 921.

19. *The Law of Mortality and of Attacks of Disease.*

The rate of mortality, as it has been said already, declines as age advances from birth to puberty, and then increases according to certain determinable laws. The mortality decreases to the age of puberty; and then increases somewhat slowly to between 50 and 60. From the age 55 to the end the mortality increases at such a rate that it is doubled for females every 8·24 years in the healthy districts, and every 8·95 years in England and Wales. At the ages 20–50 the mortality of females increases one sixth part for every 10 years of age in the healthy districts, and so would not be doubled at that rate in less than 47 years. In England the mortality of females (20–50) increases nearly one fourth part every 10 years of age; the mortality of males (20–40) increases somewhat faster, and from 40 to 50 the increase is intermediate between that of the previous age and the future, which may be called the final age increase rate.

It may now be shown that there is a certain relation between the number of deaths by any disease and the number of attacks by that disease. Some diseases are fatal to nearly every one they attack, and so they can occur but once in a lifetime: such are hydrophobia, glanders, cancer, tetanus, tabes meseuterica, phthisis, hydrocephalus, softening of brain, some heart diseases, aneurism of aorta, angina pectoris, ascites, ileus, perforation of intestine, ischuria, Bright's disease, Addison's disease, diabetes, ovarian dropsy (without operation), cyanosis, fractures of base of skull, wounds of vital parts; extensive burns; poisoning by high doses of prussic acid, strychnia, and other poisons, solid, liquid, and gaseous; submersion under water for a few minutes; suffocation. Every death here represents one case of disease or injury. As medicine affords alleviation but cannot cure, their prevention is the great end to be aimed at.

Apoplexy and paralysis are fatal generally after two or three attacks.

Then there are two other great *classes* of diseases; (a) one is fatal to a certain number of the attacked, and (b) the other causes inconvenience, but is not fatal.

Of the first class, certain diseases, as a general rule, attack a patient only once, and that in early life; such are small-pox, measles, scarlet fever, whooping-cough, enteric fever. The deaths imply a number of attacks varying with age: thus it has been shown that the mortality was such in the London Small-pox Hospital, that there was 1 death to 2·44 cases in children under 5 years of age; 1 in 2·93 at the ages 20–30; and in the two next decenniads 1 in 2·15 and 1 in 1·71.* According to a report of

* M'Culloch's Account of the British Empire, vol. 2. Article, Vital Statistics, p. 594.

the Committee of the Metropolitan Asylum District, 1872, the mortality from small-pox after the age of five was half as high, but increased in the three decenniads of age 20–50; it increased at the same rate, the deaths being 1 in 5·98, 1 in 4·22, and 1 in 3·40 among the vaccinated and unvaccinated taken indiscriminately; the mortality of the unvaccinated being much higher than the mortality of the vaccinated. So the mortality from cases of fever has been shown to increase with age.

When the cases to one death at the respective ages have been determined, the attacks from each disease can be calculated from the deaths by that disease in the expanded Life Table (pp. xciv-v).

The mortality of the cases of cholera in London, 1854, was such, that to one death there were only 2 cases; but the death-rate ranged with age from 1 in 1·36 to 1 in 2·86.* Then the contemporaneous epidemic of diarrhœa was not by a thirtieth part so fatal; there was, taking all ages, one death in 61 cases: in children under 5 *one* death in 17 cases; in adults of 35–45 only *one* death in 199 cases; the mortality in old age increasing rapidly. By applying the proper factors the attacks of cholera or diarrhœa are calculated from the deaths.

There is a peculiar class of the sometimes fatal diseases that are recurrent; such are intermittent fever, remittent fever, neuralgia, rheumatism, gout, epilepsy, asthma; one attack far from precluding, facilitates another apparently, so that one death may represent several attacks by the same disease of the same person.

Among the diseases to which the deaths give little or no clue, because they are rarely or ever fatal, may be reckoned chicken-pox, cow-pox, febricula, mumps, gonorrhœa, primary syphilis, epistaxis, varicose veins, nævus, toothache, tonsillitis, dyspepsia, worms, hæmorrhoids, gastrodynia, hydrocele, orchitis, paramenia, flat feet, obesity, corns, skin diseases of various kinds, slight wounds and injuries.

A vast amount of incapacity in the army arises from these causes; and the necessity of recording the cases of diseases, both fatal and not fatal, is evident. But it is to be borne in mind that a death is a much more evident thing than attacks of disease varying indefinitely in intensity. The death returns are the basis of all sanitary statistics.

20. *Ages at Death by particular Diseases.*

All the deaths referred to premature birth, and the greater part of the deaths from convulsions, teething, atrophy, and debility occur in the first year of life. Upon the other hand many diseases, such as cancer, apoplexy, paralysis, and many organic diseases are fatal chiefly to people of advanced ages. Others, such as phthisis, fever, and childbirth are most fatal in the middle period of life. The proportional number of the deaths from these several diseases is altered in an increasing population such as that of England; where the proportion of deaths from diseases affecting the young as those above named, for example, is overstated. The true proportions are shown in the Life Table. Thus the proportions in 1000 deaths in the 20 years 1851–70 were by whooping-cough 23·145, by measles 19·134, by scarlatina and diphtheria 48·247; whereas by the Life Table the same diseases for the same period are more correctly given as 15·161; 12·865; 34·966.

The mean ages at death by these diseases were 1·8, 2·7, 5·8 years; and the excess over the numbers of the Life Table is due to the excess

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* Report of General Board of Health, Committee of Medical Council on Cholera Epidemic of 1854.

of children of these ages in the increasing population of England. Here are some instances :—

Mean Age at Death of Persons dying from certain Causes, 1848–72; also the Deaths from those Causes to 1,000,000 Deaths from All Causes, 1851–70.

Cause of Death.	Mean Age at Death, 1848–72.	Deaths to 1,000,000 Deaths from All Causes at All Ages, deduced from	
		Life Table.	Registered Deaths.
Whooping-cough - - -	1·8	15,161	23,145
Measles - - - - -	2·7	12,865	19,134
Scarlatina and Diphtheria -	5·8	34,966	48,247
Small-pox - - - - -	11·9	6,521	8,535
Typhus - - - - -	26·0	38,107	40,170
Childbirth and Metria - -	31·7	6,921	7,364

Mean Age at Death of Persons dying from certain Causes, 1848–72; and Annual Deaths, to 1,000,000 living, from those Causes, by English Life Table, compared with the Mortality, as deduced from a comparison of the Popalation with the Deaths registered, from the same Causes in Vicenniad 1851–70.

Cause of Death.	Mean Age at Death, 1848–72.	Annual Rate of Mortality to 1,000,000 Living of All Ages, deduced from	
		Life Table.	Registered Deaths.
Whooping-cough - - -	1·8	371	521
Measles - - - - -	2·7	315	437
Scarlatina and Diphtheria -	5·8	856	1046
Small-pox - - - - -	11·9	160	204
Typhus - - - - -	26·0	963	918
Childbirth and Metria - -	31·7	169	168

The deaths by causes such as childbirth occurring in the middle of life, are not deranged; but the proportion of people dying of the diseases of old age is understated.

The births in the United Kingdom now exceed a million a year; and our Life Table shows that a constant number of a million births will, without any increase of births, maintain a population of 40,858,184, if there be no emigration. The actual population of the United Kingdom in 1871 was 31,545,741. The defect is in the adult and advanced ages.

The Annual Report of the Registrar General shows the deaths from each disease to 1,000,000 living of all ages; and as there is an excess of children in the actual population, the mortality deduced from the deaths and the population of all ages by small-pox, scarlatina, measles, whooping-cough, and all the fatal diseases of the young are overstated; the mortality by fever and childbirth are undisturbed as they occur at ages near the mean age of the living population. The constitution of the population has to be taken into account in comparing the deaths by small-pox in England with the deaths from the same disease in Sweden, France, or countries where the population is nearly stationary.

21. Effect of the extinction of any single Disease on the Duration of Life.

Whoever has lost a friend, a brother, a son by any disease will feel that its extinction would be a boon to mankind no figures can express. Something, however, can be calculated, and that is the effect of the suppression of any disease on the duration of life. Some diseases are fatal to infants, some to youths, some to men in the flower of life, some to fruit-laden patriarchs; and while the three kinds of loss differ in degree, and differ in their economic effects, they differ also in their effects on the mean lifetime.

The mean lifetime, it will be borne in mind, is found from a Life Table, which shows how many of a given number born live through each year of age, and what is the sum of the number of years they live; the sum of these years divided by the lives is their mean lifetime. Thus by the English Life Table 1000 persons live in the aggregate 40,858 years; and their mean lifetime is 40·858, nearly 41 years. Of their number 503 live to the age of 45; and after that age they live 11,771 years, so their mean *after lifetime* at 45 is 23·4 years. This is often called the *expectation of life*. The given age *plus* the mean after lifetime is the mean age at which they die.

And it is evident that in judging of the effects of the suppression of a single disease, three cases have to be considered: (1) The whole of the lives will die of the other diseases in no greater proportion than before; (2) those other diseases, such as scarlet fever and measles, will grow so much more fatal, as to make up by the loss on this head for the gain on the other, say small-pox; (3) the gain by the supercession of one disease will exceed the loss by the increment of others; or the reverse; so as to result in a partial gain, or a partial loss.

It will be convenient to consider first the cases to be, by hypothesis, of the first class; where, as for instance, when men are saved from a violent death they live as long as other people, and the rest of the community remain as they were. Then if the diseases suppressed are such as are fatal in the first year of life, for example, such as the debility and atrophy from premature birth or other causes, convulsions, bronchitis, pleurisy, pneumonia, and diarrhœa fatal soon after birth; then instead of 149,493 dying in the first year, 101,147* of that number will live through the year unless they are carried off by other diseases. Assume for a moment that this will result in an addition to the years lived by the million born, of the years lived by 100,000 average lives saved, then the mean lifetime will become instead of 40·9 years, that number of years augmented by a tenth more or 45·0 years.

Now take any other disease in the end fatal to one tenth of the living at the age of 55, and assume that by some expedient, medical art can prevent any death from it after that age, and what will be the effect on the after lifetime? It will evidently only add the years that a number of persons of that age and upwards live when they are subject to no attacks of the suppressed malady. No effect is produced in early life, and no addition is made in this case to the years lived in manhood up to the age of 55, so the expectation at birth is extended, but not greatly; whereas the full effect is felt by the men of the age of 55 and upwards. They have an enemy the less to encounter through the whole of their career to come.

There is a certain number of diseases that medical art hopes, for various reasons, to prevent. Such are small-pox, measles, scarlet fever, diphtheria, whooping-cough: some of these, if not of recent origin, were not recognized by the ancients.

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* See Tables 10 and 33–34.

Small-pox is apparently referred to by Gregory of Tours (565–8); and it is believed to have entered Europe through Arabia. The great Rhazes, who died in the year 923, was physician to a hospital in Bagdad; and he first described measles and scarlet fever under distinct names, as Sprengel shows, although the fact that he did so had been overlooked. Avicenna places scarlet fever as a distinct disease between small-pox and measles. Whooping-cough first appeared in France in 1414; and Mezerai says it cost the life of every person it attacked. Something very like syphilis had been known before; but true syphilis broke out in the summer of 1493 almost simultaneously in every part of Europe.* Leprosy at the same time declined. Diphtheria is apparently of recent birth. No doubt the origin of these diseases, and of others of the kind, is involved in as much obscurity as the origin of species; for they are also propagated in men by low species of organic life. What is certain is that they do not exist in every community; and that when they are introduced among a virgin population they attack great numbers, as in the instance of the small-pox among the Red Indians, the measles in the Fiji Islands quite recently. The exclusion of the zymotic elements, if it be complete, therefore saves free people from invasion.

But these diseases, as a general rule, attack the same person only once in his life; and the great discovery that small-pox, for some reason or other, when induced by art, assumes a milder form, led to the practice of inoculation in the East, from which it reached England. But this inoculated small-pox was sometimes fatal; and it spread the disease by infection, not in the modified, but in the pristine fatal form. To Jenner and to England belongs the immortal honour of guarding mankind against small-pox by cow-pox, which is neither fatal nor infectious.

No sooner had inoculation been introduced, than Daniel Bernoulli (1760), with very imperfect data, undertook the solution of the problem † now in hand: D'Alembert immediately attacked the hypotheses and the arguments of Bernoulli in favour of inoculation: the controversy showed the mathematical difficulties of the problem to be much greater than was suspected. The whole question was discussed by Duvillard in a work still classical in vital statistics, in which he endeavours to supply the defective data by the resources of the higher analysis. He came to the conclusion that vaccination would add 3·5 years to the existing mean lifetime.‡

As the mortality from all causes collectively, and from different causes, at the several ages, is known in England, I propose to show here how far the mortality is reduced by deducting from the general mortality the mortality from phthisis, from cancer, and from all miasmatic diseases. And then three Tables will show the number of survivors out of a million births, in the absence of the deaths from these three classes of causes. Precisely the same method is applicable to any other class of diseases.

Diseases such as scarlet fever, that are exceedingly infectious, and that attack the same life only once, will have attacked nearly every one attaining the age of 35, and will leave afterwards very few susceptible. Thus very

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* Sprengel's Histoire de la Médicine, Ed. Littré, vols. 2, 3. See pages in Index. Rhazes on Small-pox and Measles, translated from the original Arabic by W. A. Greenhill, M.D., 1858. This work of Dr. Greenhill well sustains the reputation of English medical learning. Singularly enough Rhazes himself says that the "excellent Galen" refers to "small-pox" four several times in his work; but Dr. Greenhill makes it probable that Rhazes was misled by an erroneous translation of the Greek term, pp. 141–2.

† Analyse et Tableaux de l'Influence de la Petite Vérole, par E. E. Duvillard. Paris, 1806.

‡ Duvillard's Table, derived from what he calls the Law of Mortality (in France) in the natural state, makes the mean lifetime 28·763; whereas it would be 32·256 if no one died of small-pox. See page 143, where he states that the cessation of small-pox would raise the population from 28,763,192 to 32,255,775.

few die at later ages of scarlet fever or measles, and scarcely any of whooping-cough. These diseases have no sensible effect on the expectation of life after young people are of age.

The labour of constructing and graduating Life Tables being considerable, I have, to illustrate this question, employed the short method I introduced in the Appendix to the Registrar-General's Fifth Annual Report. It is sufficiently exact for the purpose in hand.

The male mortality is used as given in the Table 59, for the years 1861–70. The subjoined extract shows the rates of mortality inclusive, and exclusive of the mortality by zymotic diseases, by phthisis, and by cancer.

The result is that if none of the males died of any *zymotic disease*—Order I.—the duration of life would be raised, should they remain subject to the existing rates of mortality from all other diseases.

Of the 510,622 boys born, no less than 411,350 will live to the age of 5; 403,871 to the age of 10; 343,674 to the age of 35; the mean after lifetime at birth would be raised from 39·68 to 46·77.

Applying the same method to the effect of the suppression of *phthisis*, which produces its maximum effect later, the mean after lifetime at birth is raised to 42·96, at 35 to 30·77.

The suppression of *cancer* would raise the mean after lifetime at birth to 39·88; at the age 35 to 29·01; at the age 55 to 16·25.

The same method will show the effect of the suppression of any other disease.

Small-pox is the only disease which can practically be superseded to a great extent by a disease itself not mortal. But the opponents of vaccination contend, that so far from leaving other diseases as they were, it increases their rates of mortality. Of course, as more live more are attacked by other diseases; but this proves nothing, so long as the lives saved from small-pox only die from other diseases in the same proportion as the rest left before small-pox reigned. There can be no doubt that cow-pox is a variety of small-pox, and is induced by transmitting small-pox lymph through the cow. Small-pox, if not fatal, does not exempt any one from measles or scarlet fever. To contend that small-pox in its severe form, if it do not kill the patient, renders him less, while the milder form renders him more, susceptible of other diseases, derives no support from analogy.

Efforts should be made to reduce all the contagious recurrent diseases to a minimum, by placing the whole population in as favourable a sanitary condition as possible, so that these diseases may be taken, as they are then, in the mildest form. The effect of favourable sanitary conditions is seen in the healthy districts, from which neither measles nor scarlet fever are excluded. They are both less fatal.

THE **Life Table Deaths** to **1,000,000 Children born alive** are—

	In Healthy Districts.	In England.	In Liverpool.
By Small-pox - - -	2,359	6,521	8,141
„ Measles - - - -	6,912	12,865	26,973
„ Scarlatina - - -	21,403	30,021	38,302
„ Whooping-cough - -	10,234	15,161	34,021
„ Typhus (including Enteric and Common Fever) -	28,146	38,107	76,563

If every child is attacked by scarlatina at some time of life, then there are 1,000,000 cases, and by the English Life Table 30,021 deaths: so the mortality of the cases is 3 per cent. The mortality of cases is at the rate of 2 per cent. in the healthy districts; 4 per cent. in Liverpool. This is the minimum mortality of cases, for thousands die young of other diseases before they can be attacked by scarlatina. By measles, whooping-cough, and fevers (typhus, typhoid, and typhinia) the variation of mortality is still greater in healthy and unhealthy conditions.

Dr. Watt showed that while the sanitary conditions of Glasgow were deplorably defective, the exclusion of small-pox had not the effect of reducing the general mortality; as in those years the fatality of other diseases increased.* And further observations tend to show that healthy sanitary condition as to food, drink, and cleanliness of person, house, and city, stands first in importance; after it, but subordinately, come quarantine, vaccination, and other preventives, as means of subduing mortality; for the mere exclusion of one out of many diseases appears to be taken advantage of by those other diseases, just as the extirpation of one weed makes way for other kinds of weeds in a foul garden.

The effect on the lifetime of extinguishing each separate disease in England may be determined by the same method, from the two great Tables (33–34), one giving the deaths of males, the other of females, from every cause of death distinguished in the tabular returns for 25 years (1848–1872).

The effect of the subtraction of the early fatal zymotic diseases, and of phthisis, fatal in middle life, is to leave greater numbers alive at the advanced ages,—greater numbers therefore to die of the diseases attendant on advancing age. As fatal consumption is developed later in life than scarlatina,† so cancer sets in after consumption: thus we find that of a million born in the healthy districts, 21,403 die of scarlet fever, 108,481 of consumption, and 27,495 of cancer; whereas out of the same number in Liverpool, 38,302 die of scarlet fever, 96,676 of phthisis, and 9992 of cancer. In Liverpool, and in the unhealthy districts, the children do not live to encounter the diseases of old age. As men die everywhere, the great difference consists in this—that in one set of circumstances a small part, in another a large part, of the secular cycle of life is accomplished.

22. Economic effect of Deaths by different Diseases.

Life has a pecuniary value. In its production and education a certain amount of capital is sunk for a longer or shorter time; and that capital, with its interest, as a general rule, reappears in the wages of the labourer, the pay of the officer, and the income of the professional man. At first it is all expenditure, and a certain necessary expenditure goes on to the end to keep life in being, even when its economic results are negative.

The value of any class of lives is determined by valuing first at birth, or at any age, the cost of future maintenance; and then the value of the future earnings. Thus proceeding, I found the value of a Norfolk agricultural labourer to be 246*l.* at the age of 25: the child is by this method worth only 5*l.* at birth, 56*l.* at the age of 5; 117*l.* at the age of 10; the youth 192*l.* at the age of 15; the young man 234*l.* at the age of 20; the man

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* See Registrar-General's 30th Annual Report, Appendix, p. 213, and Treatise on Chin-cough, by Robert Watt, M.D. (1813), pp. 375–9.

† Phthisis and scarlatina are synonyms of consumption and scarlet fever. Scarlatina was used in the Office Tables until the year 1869, when scarlet fever was substituted for it.

246*l.* at the age of 25, and 241*l.* at the age of 30, when the value goes on declining to 138*l.* at the age of 55, and only 1*l.* at the age of 70; the cost of maintenance afterwards exceeding the earnings, the value becomes negative; at 80 the value of the cost of maintenance exceeds the value of the earnings by 41*l.**. These values may be compared with the former cost of slaves in Rome, in the United States, and in the West Indies.

The amount of capital sunk in the education of professional men is not only greater, but it is probably at greater risk, and it has to remain longer under investment before it is returned. The maximum value of such a man is attained later in life, probably 40; and in the highest orders of the church, law, and politics, where experience and great weight of character are requisite, the life still increases in value at higher ages.

This valuation of life differs from that of the mother, to whom her helpless child is inestimably precious, and from that of the son, ready, in his filial piety, to sacrifice his life for his father; but it agrees well with the popular appreciation of value expressed by grief at the national losses of conspicuous characters. This is always greatest in the case of deaths at the ages when life is most precious. The Princess Charlotte and the Prince Consort are instances in our Royal family: Sir Philip Sidney, Wolfe, and Nelson among warriors who died young: Keats, Shelley, and Byron among poets: Pitt and Fox, Canning and Peel, among statesmen before their prime of life had past. The deaths of Alexander, Cæsar, and Napoleon shocked the more because they were struck down in their meridian. The poets true to nature make their heroes men in their prime: Achilles, Hector, and Æneas are only surrounded by Priam and Astyanax, by Anchises and Ascanius. Hamlet, Romeo and Juliet, Othello, Macbeth, and Antigone, in the full bloom of their power, excite the highest tragic interest; because their death is the destruction of the greatest accumulated life; and the sensation of their fall is like that when the lofty oak is struck by lightning. In the great Christian tragedy itself the mother is on Calvary, but the Son is the godlike sacrifice on the Cross.

The causes that destroy the greatest number of lives in their prime—and are therefore first in importance—are fever, consumption, violence; plagues, cholera, and war, where they prevail. Small-pox, too, where there is no vaccination, is fatal to large numbers of grown-up people. Many Englishmen are drowned at sea; and this will be considered hereafter, for it is only one example of the deaths of men resulting from their pursuits, not only in the army and navy, but in civil life.

The greatest occupation of women, as on that the continuance of the human race depends, is at the prime of life,—childbirth, childbreeding; up to that time all their force accumulates; and its loss then is a great calamity, not only to themselves, but to families. According to the Table (9.) of a million children born, 488,255 of them girls, 6921 will die of childbirth. They die at the average age of 32. If this generation exactly reproduces its own numbers, it gives birth to a million children, neither more nor less; but it does more than this, for the births in that case would be 144 to 1 death from childbirth, whereas the facts show that the mortality in childbirth is in the proportion of 1 mother to 211† children born alive. Consequently the 6921 deaths of mothers imply that this generation represented in the Table gave birth to 1,458,190 children to

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* See paper on Income Tax, by W. Farr, in Journal of Statistical Society, 1853. The return of wages was procured and carefully compiled by Sir John Kay Shuttleworth. It was from the best class of labourers in Norfolk.—Journal, vol. xvi. p. 43. Wages have since risen, and so has the cost of subsistence.

† The exact proportions are 144·488, and 210·691; the latter being deduced from 13,971,746 births, and 66,314 deaths of mothers by childbirth and metria in 20 years, 1851–70.

constitute the generation to follow. The increase of numbers thus deduced is 4·58 per cent. in 32 years, or 1·18 per cent. annually.

If English women only bore children enough to keep the population stationary, the tabular deaths by childbirth would be 4746 instead of 6921; so 2175 devoted mothers die of what some might call overwork; but it is work by which new nations are founded. And happily it is work the dangers of which can be incalculably diminished by medical art.

Enough has been established to prove the supreme importance of making renewed efforts to save the most precious of precious lives from fever, consumption, cholera, violence in all its forms, and childbirth.

23. *Hygienic Topography.*

The variation in the mortality, and in its causes, due to differences in the body itself at different stages of development have been discussed; the extreme limits of variation under different sanitary conditions have been pointed out; and the relation between health and the density of population under ordinary existing sanitary conditions has been determined.

There remain other conditions, the influence of which on the health of a community is unquestionable: such are (1) the physical well-being of the people as to dwellings, food, drink in excess or defect, (2) firing, (3) cleanliness and clothing, (4) sewage and drainage, (5) rivers, geological formation, and elevation of soil. The facts in this volume will assist inquirers in investigating such influences. I propose to notice here briefly the districts under the eleven Divisions, which present any remarkable deviations from the average standard of health and vitality, either in the way of defect or excess.

Division I.: London.—London consisted formerly of 37 districts; the districts are now 28. This city, the greatest, the most populous, the wealthiest in the world, is situated on both sides of the Thames; an embanked river, up which the sea sends its tidal waters in ebb and flow twice daily to Teddington lock. The banks once covered with mud, are clothed with magnificent granite terraces, which match the fine many-arched bridges. The Southwark side, still unembanked, is low, for on an average the houses in the last ten years were on ground only 6 feet above Trinity high-water mark, but it ranged in the sub-districts from three feet below Trinity high-water mark in St. George Camberwell, to 128 above that mark in Norwood, 167 in Eltham, and 188 in Sydenham. Ascending from the central city, and from the Thames on the north side, the streets climb the undulating hills to Hampstead and Highgate; at the west end, from the low Westminster, Chelsea, Fulham, and Hammersmith, the land rises to Paddington, Hanover-square, St. James Westminster, and Marylebone. The east end descends from Shoreditch, Bethnal Green, and Whitechapel to the low parts of St. George-in-the-East, Stepney, Poplar, and Bow which is bounded by the tributary Lee. The mean elevation above Trinity high-water mark; of the South districts is 6 feet, of the East districts 26 feet, of the West districts 28 feet, of the Central districts 49 feet, of the North districts 135 feet. The mean elevation of London is 39 feet. The area is 122 square miles; in 1851, 1861, 1871 the population to a square mile was respectively 19,363, 22,984, and 26,674. The annual rateable value of property in 1871 was nearly 20,000,000*l.*, on an average 48*l.* an inhabited house, 6*l.* 3*s.* a head. Like the population it has been continually increasing since 1851, and probably at a faster rate. The water supply is taken from the Thames, the Lea, and wells; the average supply for domestic purposes by eight companies to each house of 7·8 inhabitants is nearly six metric tons a week.

The most important sanitary work of London is the new system of sewerage which was adopted after repeated inquiries by the ablest engineers, and has been carried out under the rule of the Metropolitan Board of

Works by Sir Joseph Bazalgette,* who in 1865 reported the whole of the main drainage as completed with the exception of the low level sewer on the north side of the Thames. That was only partially completed at the end of 1870.

This eminent engineer says, that London, with all its defects, "even "prior to the introduction of the improved system, was probably the "best drained city of the present age" (p. 4). Up to the year 1815, it was penal to discharge sewage or other offensive matters into the sewers; cesspools were regarded as the proper receptacles for house drainage, and sewers as the legitimate channels for carrying off the surface waters only. Afterwards it became permissive, and in the year 1847 the first Act was obtained making it "compulsory to drain houses into sewers." London derived a large portion of its water from the Thames, into which the sewage was poured. And the great fatality of the subsequent epidemics of cholera in 1848–9 and 1853–4, stimulated the action of the new Metropolitan Board, created in 1856. "Acting on the indications afforded by "the Registrar-General's return, the Commissioners of Sewers endea-"voured to afford an outlet into a good sewer for every infected locality;" but they speedily found a limit put to their operations by the "carelessness "and cupidity of preceding generations," p. 8.

The system thus organized had the effect of carrying the sewage of the metropolitan area low enough down the river to prevent its return beyond London Bridge; so the river will eventually become pure. It is only in times of flood that the waters of the sewers are discharged into the upper river. What is wanted to complete this magnificent work, is the distribution of a large portion of the sewage over well drained land far below London, or on the waste by the sea as was once projected.

The metropolitan police, wisely organized by Sir Robert Peel's Act in 1829, contributes essentially to maintain the safety of life in London.

In the absence of an adequate administrative governing body, as London was supplied by companies with water as the demand arose, so it was supplied also with gas; and still pays an enormous tax on these two commodities, with which it would have been supplied at cost price had it enjoyed the full advantages of an enlightened municipal government.

Some disturbances of the rates of mortality arise in London from migration. There is a continual influx and efflux of population. People born in the country come to London; London children emigrate; some men who have acquired wealth retreat as years come on. Multitudes of natives live and die in London. Patients labouring under mortal diseases are sent from the country to the London hospitals, where they die; and this affects the mortality of males especially, at the ages 15–35 to some extent, but this is counteracted by the excessive immigration at those ages of lives good above the average, and by the return home probably of a certain number of unmarried women labouring under consumption, a disease of one or two years' duration.

Twice as many males as females die in hospitals; one cause of the excess being the great number of violent deaths among males.

The mortality at all ages was at the rate of 25 per 1000 in 1841–50, and 24 in the two subsequent decades. The mortality of children under five years of age is higher than it is in the other divisions except the North-western, including Lancashire and Cheshire; but it is much lower than the mortality experienced by children in many other large towns.

The mortality of women in London at the ages 45 and upwards exceeds the mortality of the women in the other divisions except the North-western; and consequently exceeds the mortality of the women of England generally.

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* Metropolitan System of Drainage and the Interception of the Sewage from the Thames. By J. W. Bazalgette, M. Inst. C.E. Minutes of proceedings of the Institution of Civil Engineers, vol. xxiv. sess. 1864–5.

But what is especially remarkable in London is the high mortality of men of all the ages after 25. The mortality at the ages 35 to 45 is 1·346 per cent. in all England; in the Eastern counties it is 1·035; in the North Midland counties ·993; but in London it is 1·714. At 45–55 the mortality in all England is 1·916, in London 2·568. It is only in the North-western counties that the mortality of the men of London is approached. The mortality of women in London is increased to nothing like the same extent.

The excessive mortality of London men is due to phthisis and pulmonary disease, as will be seen in the Table 76. Thus at the age 45–55, the mortality per 1000 living, by phthisis is 3·860 in all England, 6·380 in London; by lung diseases 3·500 in all England, 4·843 in London; by phthisis and lung diseases together 7·360 in all England, 11·223 in London.

These numbers are not sensibly deranged by the deaths of strangers in the London hospitals.*

This subject requires full investigation. What is it that is so fatal to the working men of the Metropolis? Is it the smoke they breathe? It is well established that dusty particles in the air interfere with respiration. They shut up and irritate the small bronchial tubes. Women breathe the smoky air as well as men, and yet they do not suffer to the same extent. Is it the dust of the workshops and streets, or the crowding? That has no doubt its influence. But will it account for the whole of the excessive mortality? Not only the roughs, but the intelligent artisans of London do not wash the whole of the body daily, and their skin has its millions of pores blocked up or poisoned by sweat and dirt for a week together. The effete perspiration is noxious: is it not one cause of the premature loss of lives so precious to their families and to their country?

The mortality of men at the same ages in Sheffield has been so great that their disease has acquired the name of "grinder's rot." And it deserves notice that in Sheffield and other manufacturing smoky towns, the excessive mortality of men exceeds that of London at the same ages.

Men are more intemperate than women; but I am not aware that the intemperance of the men of London is greater than the intemperance of men in other places where the mortality is not so high. And pulmonary disease is not that form in which death approaches the intemperate. Women are cleaner than men for various reasons; and the skin of the wife is less exposed to contract impurities than the husband perspiring at hard work amidst impurities.

The violent deaths of men at the working ages is high in London, but not higher than it is in all England.

The mortality of the various districts of London differs; it ranges from 16 in Hampstead, 19 in St. George Hanover-square, 19 in Lewisham, and 19 in Wandsworth, to 27 in Westminster and Bethnal Green; to 28 in Holborn and Stepney, 29 in St. Giles, and 30 in Whitechapel and St. George-in-the-East. All the latter districts contain "rookeries." These numbers are corrected for the disturbing deaths in hospitals. No correction for this derangement has yet been made of the mortality at the several ages in the various districts.

Lewisham affords a striking instance of the effect of increase of density: the mortality was at the rate of 17 per 1000 in 1841–50; it rose to 18 in the next decade; and to 19 in the last; the density increased during the three terms, and in the last was tripled. Thus it is that unless the sanitary improvements of a district keep pace with the increase of its population the mortality inevitably increases.

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* The part of the mortality of males occurring in the London Hospitals during the years 1851–60, was at the four ages ·245; ·303; ·365; ·384; and while it is known that a certain number of the patients were brought in from the country, the proportions of deaths of strangers could not have exceeded a fifth part; or ·049; ·061; ·073; ·077. The proportions in the next decade underwent little, if any, change. The greater part of the lunatics of London are in Colney Hatch and Hanwell asylums outside its limits

Division II. South-eastern Division: *Surrey and Kent* (*extra-metropolitan Districts*), *Sussex, Hampshire, Berkshire.*—This division lies south of the Thames, surrounds the Medway, and stretches down to the sea. It has an outer broken ring of marsh land and clay by the embanked Thames, the Medway, in parts of Sheppey, Thanet, Romney, and Southampton: a wider broken ring of chalk rising into downs; and within the chalk green sand surrounding the Central Weald of Kent and Sussex, where the Andredes forest once spread its gloom, and once supplied the iron workers, the manufacturers, with fuel. It is the healthiest division in the country; but the districts vary in salubrity. The mortality is as low as 16 and 17 in a thousand on the high open chalk downs, the green sand, and the gravel; as high as 23 in thinly-peopled marshy Hoo, 23 in Southampton, and 24 in Canterbury. The mean density is 1·99 acres to a person; less than that of all England; the mortality in the first ten years was 20, in the last 19;* or three degrees below England.

III. South Midland Division: *Middlesex* (*extra-metropolitan*), *Hertford, Buckingham, Oxford, Northampton, Huntingdon, Bedford, Cambridge.*—The London clay extends some distance from the Thames, this is followed by the oblique chalk chain of Chiltern hills, and green sand enclosing galt; oolite upper, middle, and lower, notably its Oxford clay and ironstone; then round the west is the fen region, including the Isle of Ely. The chief waters flow into the Thames, and by the Ouse and Nen into the Wash. The Bedford Level and other levels have drained and reclaimed the fen land. The small counties are agricultural. But the straw plait and the lace, both domestic manufactures, of which Bedfordshire is the centre, employ a large number of hands. Northamptonshire is a great seat of shoe manufacture, and iron ore has been recently worked in the county. Marriages of both boys and girls under age are very common. The mean mortality of the division was in the first decade (1841–50) 21, in the last 20, annual deaths to 1000 living. Uxbridge and Barnet contain the two great Middlesex lunatic asylums; excluding Colney Hatch, the mortality of Barnet was 17; Staines was 18, Hendon including Harrow 18, Ware 18, Royston 18, Hatfield 18, Eton 18, Henley 18. In nearly all the other districts the mortality is 20 and upwards; in Aylesbury 21, Bedford 20, Oxford 22, Cambridge 22, Northampton 24. In Ely the mortality was 23 in the first, 20 in the last decade: in North Witchford, Whittlesey, and Wisbech the mortalities fell from 27, 25, and 25 to 20, 21, and 20 in 20 years. The density of this division was much less than that of England. There were 2·69 acres to a person in the first, 2·53 in the second, and 2·34 in the last decade; the mortality was 21 in the first, 20 in the second and third decades; or 2 below England.

IV. Eastern Division: *Essex, Suffolk, and Norfolk.*—Chalk, London clay, and crag are the prevailing features of the geology of these three agricultural and maritime counties, lying north-east of London, to which they send many inhabitants. The flat land with an eastern aspect is swept by the east winds. Agriculture occupies nearly the whole of the inhabitants, except the fishermen on the coast. The education of the men is lower than that of the women. The proportion of children born out of wedlock is low in Essex, high in Norfolk. There are few towns. Norwich, which still retains some of its beautiful manufactures, is the only city of any magnitude. The population, with its Scandinavian infusion, is less dense than any other English division, except the northern. There were 2·98 acres to a person in the first, 2·72 in the third decade.

The mean mortality in the counties was 20 in the first, and 20 in the last decade; 2 degrees below that of England. It was 21 in the second decade. In the last, Billericay in Essex showed the low mortality of 17, Epping,

* Per 1000 per annum is understood, unless the contrary is expressed.

Ongar, Orsett, Lexden 18: Thingoe, Plomesgate, and Mutford (including Lowestoft) in Suffolk 18; and Loddon in Norfolk 18. The mortality was as high as 20 in West Ham in Essex, but actually a suburb of East London; 22 in Colchester, 22 in Ipswich, 22 in King's Lynn, 23 in Bury St. Edmunds, 24 in Yarmouth, 24 in Norwich.

V. South-western Division: *Wilts, Dorset, Devon, Cornwall, Somerset.*—This Division, like a fine long promontory, stretches out from Salisbury Plain between the Bristol and the English Channels to the Scilly Isles, where it encounters the Atlantic waters, which suffuse and fertilize its surface with rains.

The sea, chalk, new red sandstone, old red sandstone, the Devonian formation and granite, interspersed with mineral veins, give a distinct character to its industries. The population is chiefly agricultural in Dorset,—the densest purely agricultural county in England,—and in Wiltshire, where sheep wander over the plains. The vast pastoral leafy Devon round Exmoor and Dartmoor ends in the mining region which culminates in Cornwall, where tin and copper are worked. Somerset is marshy along the coast and round the Parret and up to Ilchester, Glastonbury, and Wells: then limestone, coal measures, and new red sandstone are commingled north of the Mendip Hills as Bristol is approached. The Avon is navigable for large vessels up to Bristol. Cheddar cheese is produced near Axbridge. Exeter, Plymouth, and Bath are the only cities of magnitude in the Division. The population, partly Celtic in the West, is less dense than in any English Division except the Eastern and Northern. It has varied little in the thirty years: for in the first decade there were 2·82 acres, in the last 2·68 to a person. The annual rate of mortality through each of the three periods was 20; 2 degrees below the English standard.

In Wilts the mortality in the 10 years, 1861–70, was 18 in Highworth, Malmesbury, Calne, Warminster, Amesbury, Wilton, and Tisbury. In Melksham and in Alderbury the mortality was 22. Salisbury presents a remarkable example of the good effect of sanitary measures: its mortality was at the rate of 28 in the first, 24 in the second, and 20 in the third decade. In Dorset the mortality is low; 17 in Wareham, and in Weymouth (including Melcombe Regis); 18 in Sturminster, Blandford, and Wimborne; in Poole and in Bridport, districts including small towns, the mortality was 21. In Devonshire the mortality is 17 in Okehampton, 18 in South Molton, in Barnstaple (including Ilfracombe and Lynton) and in Holsworthy. The mortality of Newton Abbot (including Dawlish, Torquay, and East and West Teignmouth) was 18 in the second, 20 in the third decade, the proportion of town population having greatly increased without corresponding sanitary arrangements. So in Totnes (including Dartmouth, Brixham, and Paignton), the mortality rose from 19 to 20. In Plymouth, the great naval station, the mortality in the three decades was 25, 24, and 23; in East Stonehouse (including part of Devonport and the Royal Naval Hospital) 29, 27, 27. The mortality of females as shown in the Age Table, p. ccxxvii, is low in East Stonehouse, hence it is probable that the excess of mortality is due to the importation of sick sailors. The mortality of Exeter appears to remain stationary at the high figure of 25. In Cornwall the mortality is at the rate of 18 in Camelford, Launceston, and Bodmin; it reaches the higher figure of 21 to 23 in St. Germans, Truro, Falmouth, Redruth, and Penzance, including a large mining population. In Somersetshire the mortality was 17 in the district of Dulverton, 18 in Williton and Wellington, and 19 in Axbridge (including Weston-super-Mare), and in nine other districts. The mortality of Bath was at the rate of 24 in the first decade, but has been reduced to 22 in the last 20 years.

VI. West Midland Division: *Gloucester, Hereford, Salop, Stafford, Worcester, Warwick.*—This Division is on the Severn and the counties

watered by the Wye and the Stratford Avon. It lies between Wales and the Eastern counties in the broad middle of the widest part of the island. The Thames and the Trent have in it their sources. The Bristol, Forest of Dean, Staffordshire, and Shropshire coalfields give it, in conjunction with the ironstone, a central manufacturing population, of which Birmingham and the Black country are the centres, surrounded by the agricultural population of the fields and rich pastures of the other counties. The Black mountain divides Herefordshire from Wales; the Cotswold Hills in the south, Malvern and the primeval hills of Shropshire rise from the midst of the old red sandstone of Herefordshire, and the new, far and wide-spread red sandstone of several of the counties. Herefordshire is a purely agricultural county; famous for its stock; apples and hops abound. The great town districts are Bristol and Birmingham, with the several county towns. Few minors marry in Salop or Hereford, while in Stafford their proportions are excessive. In Gloucester education is in advance of the country generally; in the other counties it is much below the standard. Staffordshire is the most benighted county. More than 40 per cent. of the women married—the mothers of the children to be—sign the marriage register with marks. There is a considerable excess of children born out of wedlock in Salop and Hereford; where few minors marry. In the first decade the density of the division was 1·91 acres, in the third 1·50 to a person. The mortality was at the rate of 22 in the three decades; the density having continually increased. The mortality was higher in Staffordshire and Warwickshire; lower in Gloucestershire, Herefordshire, Shropshire, and Worcestershire than the average of all England. The mortality was at the rate of 17 in Thornbury and Wheatenhurst; 18 in Cirencester, Northleach, and Winchcomb; 19 to 21 in the other districts of Gloucestershire. In the Bristol district the mortality is still excessively high; it was 29 in the first and remained 29 in the last decade. In Cheltenham the mortality has declined from 20 to 19, at which it has stood for twenty years.

In Ledbury the mortality was 17, in Weobly 18, in the four other districts of Herefordshire it ranged from 19 in Bromyard to 21 in Hereford.

The mortality was 17 in Atcham district surrounding Shrewsbury, 18 in the thinly-peopled Clun, Church Stretton, Cleobury Mortimer, Bridgnorth, Market Drayton, and Newport. It was 22 in Madeley, and 22 in Wellington, both mining districts, and 25 in Shrewsbury. This county town is not so healthy as it might be made on its beautiful site by sanitary arrangements, but this high mortality has to be corrected for the excess of deaths in the county infirmary. The mortality in the other Salop districts ranges from 19 to 21.

In Staffordshire the mortality (1861–70) is nowhere so low as 17; in Penkridge it is 18. In the pottery districts of Newcastle-under-Lyme, Wolstanton, and Stoke-upon-Trent it is 22, 25, and 26. The mortality of these districts has decreased; it was 26, 26, and 27 in the first decade. The mortality of Wolverhampton was 24, Walsall 24, West Bromwich 22, and 25 in Dudley. Wolverhampton is an example of improving health, declining mortality; it was 27, 28, and 24 in the three decades. Walsall and Dudley exhibit no improvement in the 30 years.

In King's Norton district,—the west end of Birmingham,—the mortality was as low as 17; so was it in Pershore, Martley, and Upton-on-Severn; in Tenbury and Evesham the mortality was at the rate of 18; in Stourbridge, including Halesowen, it was 24, 23, and 22; in Worcester district 24, 23, and 25 in the three decades. The mortality of the other districts of Worcestershire ranged from 19 to 21.

The Birmingham district heads Warwickshire with a high mortality; it was 26 in the first decade, and 27 in the last two decades. The Queen of the metal industry of England is thus evilly beset with destructive forces, which we may hope she will by her own skill and energy vanquish. The

place is not naturally unhealthy. But the people want pure water, air purged of impurities, and a well drained soil. The districts of Nuneaton and of Foleshill experience a mortality of 23. Coventry exhibits a reduced mortality ; the rate has fallen from 27 to 25, and finally to 21. It illustrates the effect of enlightened sanitary administration. Solihull which did lose 18 per 1000 in the first two decades lost only 16 in the last.

The mines interfere with the water-supply and drainage of some parts, and the houses and towns of rising industries are often run up on speculation with no arrangements for cleanliness; so the people suffer as armies did formerly in dirty camps.

VII. North Midland Division : *Leicester, Rutland, Lincoln, Nottingham, Derby.*—From the Peakland and over the watershed of the west this Division descends through the alluvial land interspersed with a network of drains to the shores between the Wash and the Humber. The division sends streams to the Avon, the Mersey, and the Ouse, but its great artery is the fair and fast-flowing Trent, with the Welland and the Witham wandering about Lincoln down to the Wash. Red sandstone, coal measures, lias, oolite, and chalk diversify the land, which is rich in agricultural produce, especially over the drained Fenland. The Leicester breed of sheep is well known, and so are the horses of Lincoln. Derby, Nottingham, and Leicester are large populous old manufacturing towns; they are seats of hosiery, machine lace, and silk manufactures. The country varies in density, but generally it is one of the less populous areas, and except in Nottingham, Radford, and Basford, which form one agglomeration, and Derby, Belper, Leicester, and Chesterfield, there are few dense districts in the division, which is largely impregnated with the Danish stock of people, and was the centre of the popular hero Robin Hood's exploits. Billesdon is one of the most thinly-peopled districts, and its mortality was low, but in the latter decade it was found that the Registrar had neglected his duty, and he was dismissed. The rate of mortality was about 16 ; in the well-known Melton Mowbray, in Market Bosworth, Market Harborough, and Lutterworth the mortality was 19 ; in Loughborough it was 23 ; in Leicester, where the population is very dense, it was 26. In the other districts of Leicestershire the mortality ranged from 20 to 22. In Sleaford, Horncastle, and Spilsby in Lincolnshire the mortality was at the rate of 18 ; in Lincoln and in Glanford Brigg 20, in Gainsborough 21, in all the other districts 19. In agricultural Rutland the mortality was 18 in Uppingham, 20 in Oakham. Southwell and East Retford in Nottingham had a rate of mortality equal to 19; in Mansfield the mortality rose in the three decades from 20 to 21 and to 22. The mortality declined in the Nottingham district from 26 and 27 to 24. In Derby and Shardlow the mortality declined from 24 and 20 to 23 and 19. In Chesterfield, including the Claycross and Staveley collieries, the mortality rose from 21 to 22. In both Bakewell (including Matlock) and Chapel-en-le-Frith (Buxton), the mortality rose from 20 in the second to 21 in the third decade.

VIII. North-western Division : *Chester, Lancaster.*—The Division stretches from the pennine range that divides it from Yorkshire to the coast round the Dee that descends from the mountains of Wales, the Mersey, the Ribble, the Wye, the Arne, and Morecambe Bay. Millstone grit, red sandstone, coal measures, clays, and peat-mosses are covered with people and pasture land. It is traversed by canals and many railways ; and saw the first railway opened. The great port of Liverpool puts this population with the stored-up force of ages in direct communication with America and the rest of the World. It has wealth, and now it asks for health. The thickly-peopled towns make it, after London, the densest of all the divisions. It is more than three times as dense as the rest of England. The women married are below the average standard of educa-

tion ; and there is some excess of early marriages. In the three decades there were ·88, ·74, and ·63 acres to a person ; and the mortality was at the rate of 27, 26, and 26. So we are cheered but not satisfied with a slight improvement ; enough to stimulate every energetic and enlightened authority to renewed exertions. In Cheshire the mortality is at the rate of 19 in Altrincham, 20 in Nantwich, and 23 in Birkenhead ; and in no district, except Wirral (18), lower. In the districts of Runcorn, Northwich, with its vast saltworks, and Congleton, the mortality is 23, 22, and 22 ; in Stockport and Macclesfield, where the cotton and silk manufactories employ thousands of hands, the mortality is 25 and 23 ; in Macclesfield the decline from 26 to 25 and 23 implies improvement in the three decades. In Lancashire the majority of the districts have a mortality exceeding the mortality of England. In Garstang the mortality is 18, in Clitheroe 20, and in Lancaster 20. Liverpool and West Derby, Manchester, and Salford, are at the head of a mournful cohort of unhealthy districts which call aloud for Healers.

Lancashire has to contend with difficulties in its mines, its manufactures in-doors, the dust, dirt, and smoke of the air, the impure waters, and the middens, and the crowded populations of its towns. The men suffer severely at the working age ; and though the women do not die at the same rate, the mortality of women and of children exceeds that of any other division in the kingdom.

IX. Yorkshire.—This great county is a Registration Division, and its statistical convenience as regards area and population, entitles it to serve as a model. It slopes from the chain of hills that divides it from Lancashire down to the East coast, and the vast vales watered by the Ouse and its tributaries are its fertile centres ; alluvial soils, fertile meadows, chalk wolds, moors, oolite, red sandstone, limestone, and great coal and iron formations, rivers and seas, furnish a field for the older and varied industries of this county. The education of the women in the West Riding is backward ; more than a third of the married sign the register with marks. The men of the West Riding are at the average ; the men and women of the North and East Ridings are above the average standards. In the West Riding there is a great excess of early marriages. The inhabitants are as sagacious as they are industrious ; but hitherto absorbed in their wonderful productions they have neglected their health. The mortality of the West Riding is increasing. It was at the rate of 23 in the first decade, 24 in the second decade, and 25 in the third decade. This deplorable sanitary declension of Yorkshire is one cause why the mortality of England shows no more signs of sanitary improvement. The density, it should be added, of the prospering manufacturing districts of Yorkshire has gone on increasing ; in the first decade there were 2·17 acres, in the last 1·68 to a person in the county. The mortality of men at the working ages is higher than it is in many divisions ; but it does not exceed the mortality of England. The mortality of women at the ages 20–45 is higher than it is in many divisions, but it is little higher than it is in all England.

In Sedbergh the mortality was at the rate of 16, in Settle 18, in Hemsworth 19, but in the other districts of the West Riding the mortality ranged from 20 in Ripon, to 25 in Bradford, 29 in Sheffield, 30 in Leeds. The mortality is stationary in Leeds, or rather it descended from 30 in the first, to 28 in the second decade, and rose again to 30 in the third decade. In Sheffield the density and the mortality of its population have gone on steadily increasing ; the rate of mortality in the three decades was 27, 28, and 29.

In the York District the mortality is at the rate of 23 ; in Hull District 26, Sculcoates, including part of the borough, 23. Hull drank sewage water in the first decade ; and the mortality from cholera, then epidemic, was appalling. The mortality was 31 ; it descended to 25 in the second decade ; and in the last rose again to 26. In the North Riding, Richmond,

Leyburn, and Easingwold, the mortality was at the rate of 18. In Scarborough District, including the town, the mortality rose from 21 to 22, in Whitby from 20 in the second to 23 in the third decade. Guisborough, containing part of Middlesborough, was one of the healthiest districts in the kingdom; its mortality was at the rate of 16; the rate is now 22, no adequate provision having been made for the people attracted by the works carried on with so much activity and intelligence.

X. NORTHERN DIVISION.—*Durham, Northumberland, Cumberland, and Westmorland.** This Division stretches to the Irish Sea from the German Ocean, into which the Tees, the Tyne, and the Tweed, flowing from the dividing mountains, pour their waters. Red sandstone, slaty rocks, coalfield, ironstone, minerals, iron and chemical works, and shipbuilding are now attracting thousands of workmen to the north. The population has recently increased faster there than in any other division. The lofty mountains, the fair lakes fed by abundant rainfalls, distinguish the west as much as the coal and iron industry and their ports distinguish the counties on the eastern coast. The population is dense on the east side, scattered on the north; so that the low average density gives an imperfect representation of the actual effective density. In education the three northern counties excel the average of the country. There is here as in Scotland also an excess of illegitimate births. Durham, like the other mining counties, is distinguished by the inferior education and the early marriages of the women; nearly all the children are born in wedlock. The mortality is at the rate of 23; in the first decade it was 22. In the four counties there is this gradation in the rate of mortality: Durham 23, Northumberland 23, Cumberland 22, Westmorland 18. Descending to districts: Teesdale (including Barnard Castle) is the only one in Durham with a mortality so low as 19; in Stockton (including part of Middlesborough) the mortality is at the rate of 23; Auckland, Houghton-le-Spring, Chester-le-Street, Sunderland, and South Shields 24; Gateshead 25. We enter Northumberland, over the Tyne, with a rising mortality of 28 in flourishing Newcastle, 24 in Tynemouth. The mortality is at the low rate of 17 in Haltwhistle, Glendale 15, Rothbury 16. Bellingham is losing its pre-eminence, and Belford is threatened. In Cumberland, Bootle, Brampton, Longtown, and Penrith are the first in the order of salubrity; but their mortality is higher than it was in previous decades. Carlisle is denser and less healthy than it was ten years ago. The mortality is still low in Westmorland; it is 16 in the East Ward, 18 in the West Ward, and 19 in Kendal.

WELSH DIVISION.—*Monmouthshire, six counties of South Wales, six counties of North Wales.* The population is chiefly of the ancient British stock, and still Cambrian in manners and at heart, has now interfused in the mining districts large numbers of men and women from the bordering sixth division, and from the fifth division from which it is divided by the Bristol Channel. Besides the rapid streams that flow down from its mountains to the western coast and to the south, its waters are collected in the Dee, the Severn, and the Wye. The old red sandstone extends from Monmouthshire to Brecknock; coal formations fill the greater part of Glamorgan, and are found again in Flint and Denbigh. The Silurian and the Cambrian systems predominate in the other counties. Ironworks, copper-smelting, and tin-plating are carried on largely in South Wales. The flannel manufacture has given Welsh flannel a name; the cattle, sheep, and ponies are a conspicuous part of the stock of the small farmers whose industry covers the several counties. The population is condensed in the mining and manufacturing counties; over the hills the cottages are thinly scattered. The want of practice in speaking English is an obstacle to the

* See a description of the Physical Features of this and the other Divisions in the preliminary Report of the Census, 1871.

education of the people; hence two-fifths of the women and more than a fourth of the men sign the marriage register with marks. The marriage of minors is common in Monmouthshire, uncommon in North Wales, and the illegitimate births, as happens elsewhere, are in inverse proportion.

There are on an average 3·79 acres to a person, and the mortality of the principality is at the rate of 21 in 1000. It was 20 in the first decade, and rose to 21 in the second decade.

In Chepstow the mortality is at the rate of 19, in Monmouth 20, in Abergavenny 21, in Newport 21. The mortality in Newport has rapidly declined in the three decades from 24 to 22 and 21. The mortality is 24 in Bedwelty.

In Bridgend the mortality is at the rate of 20, Gower 20, Cardiff 21, Pontypridd 23. In Merthyr Tydfil the rate was 28 and 29 in the first two decades; it is now 25. The improvement is due to sanitary measures which have only to be completed to reduce the loss of life to a still lower figure. The mortality is at the rate of 16 in Tregaron, 17 in Lampeter, 18 in Newcastle-in-Emlyn in Cardiganshire, 18 in Rhayader. In the other districts of South Wales it ranges from 19 to 23 in Crickhowell.

In North Wales the mortality is at the rate of 18 in Bala in Merioneth, and Pwllheli; in the other districts of North Wales the mortality ranges from 19 in Llanrwst and 20 in Conway (including Llandudno) to 24 in Wrexham (including Ruabon). It is to be regretted that Anglesea is getting more fatal to its inhabitants than it was; the mortality in the three decades was 17, 19, and 21. Sanitary arrangements appear to have been in abeyance in Anglesea, although it has in it Holyhead.

24. Health *of* Men *engaged in various Occupations.*

Small principalities and republics have alike contributed their quota to art, science, and literature; and among them Modena under the house of Este deserves mention. There, on the northern slope of the Appenines, Fallopius first saw the light; and Bernard Ramazzini, born in 1633 at Carpi, has made Modena for ever memorable by his *De Morbis Artificum Diatriba.* In the University he was the Professor of the theory of medicine from the year 1678, the date of its foundation by the Duke Francis II., and in Modena during his practice to the end of the century, when he was called away to take a chair in Padua, he collected the observations on the diseases of men engaged in the arts and professions. And that city may be well held in the same regard as the cities that the "starry Galileo" made so famous by his observations, for though the observations were made in workshops and not in celestial space, their immediate result was the relief of the incidental sufferings of the men to whom the world owes much of its progress and many of its enjoyments.

Ramazzini created a new art, the art of preserving the health of the men who are engaged in the arts of life. In his work he refers the abundant and varied crop of diseases from which artisans suffer to two distinct heads: the noxious materials in which they work, and to the violent disorderly movements of the body, as well as its incongruous attitudes, acting on the structure of the vital machine.

He commences with the miner and passes in review all the workers in metals; describes the diseases arising from working in mines, from quicksilver, antimony, lead, copper, tin, arsenic, iron; all those maladies that afflict the *vir metallicus*, to use the characteristic designation of Hippocrates. He then takes the workers in materials of vegetable origin, and devotes a special chapter to the agriculturist. His chapters on wet nurses and midwives are highly curious. He surveys nearly the whole field of human activity in an Italian city.

In his chapter on soldiers (*milites*) he treats of the diseases of armies in the field, not, as he says, from personal experience, but from report. But

he had in some Brunswick physicians excellent informants who had been engaged in the last Hungarian war, and he sets the causes of camp fevers, dysenteries, and other maladies in the clearest light. Sir John Pringle in his classical work developed and established the true doctrines of military hygiene, so that our subsequent losses due to its disregard were quite inexcusable.

The chapters on the health of the learned and the scientific professions are elaborated with great care. And leaving the homes of workmen Ramazzini wrote a special treatise on the health of vestal virgins, a name by which he designates nuns, who, he says, excelled the vestal virgins of old, whose vows were for thirty years. A second treatise *De Principum valetudine tuenda* is full of instruction, and deserves to be read, not only by all princes, but by all persons of wealth and rank. He pleads with them the cause of their own as eloquently as if he were pleading for his own life.

Ramazzini was in possession of all the ancient learning, and he everywhere refers with reverence to Hippocrates as the *Divine* Preceptor. He is equally well versed in the most recent discoveries of that age. No one has expounded more clearly the immense importance in all medical reasoning of Harvey's immortal discovery of the circulation of the blood.

What is most defective is due to the imperfection of the chemistry of his day, and to the absence of exact observations on the mortality of men in the different professions.

Thackrah wrote an excellent work on the effects of various occupations on health. It is the result of conscientious study; and if not marked by the learning and eloquence of Ramazzini is characterised by sound professional sense. French and German writers have contributed much information on this subject; but nearly all of the previous writers employed methods which could render no precise results, except in cases where the influences they dealt with were very powerful. The effects of compensating circumstances in a trade could not be weighed; and they were more impressed by the sickness than the mortality of the workmen in any particular business.

The mean age at death of people in different businesses often furnishes very erroneous indications, as it is affected as much by the ages at which people enter and leave, and by the increase or decrease of employment, as by the salubrity or insalubrity of any particular profession. The only way in which the mortality, and the duration of life, of miners, tailors, farmers, labourers, or any other class of men can be accurately determined is to determine the ratio of deaths at each age to the living during a certain time—in fact to apply the same method to each class as is applied to determine the mortality and the mean life-time of all classes in a town, in a district, or in the whole kingdom.

The materials for such an inquiry extending over all the recognised trades of the men of England were in part supplied ten years ago in the Supplement to the Registrar-General's 25th Annual Report; and it has now been deemed right to publish as a sequel the deaths in 1871 in the same classes at ten different ages in England and Wales, in each of its divisions and in eighty town districts.

This series will serve as a good basis to the inquiry into a subject next to none in importance in an industrial country. The inquiry must embrace at least the various questions of which an outline is given in the Census Report of 1861 (pp. 29–30). It well deserves the attention of the Health Officers. Every help may be expected from the intelligent artisans of the country, who have, in the Reports of the Odd Fellows Society, shown their appreciation of it by giving the rates of sickness and mortality in different trades. The late Mr. Neison and his son have ably discussed the materials derived from the various friendly societies, and with their observations those here published may be usefully compared. They throw light on each other.

As an illustration of the uses to be made of the facts relating to occupations two sets of tables have been calculated, the one of sixteen groups

constituted so as to embrace well-defined occupations or groups of allied and easily confounded occupations. The results are sufficiently remarkable.

The high mortality of those two important classes the publicans and butchers is unfortunately still maintained. It may be well if the many persons of intelligence and influence amongst them would inquire into its causes.

In the Appendix to the Report of the Commission on Mines over which Lord Kinnaird presided I have given life tables for miners, and tables showing the deaths of miners from different causes, which may assist those who are engaged in investigating other occupations, as the same methods are applicable to all.

In Tables 25–26 the results deducible from the returns for the learned and other professions are given ; which are instructive, but have to be read with care, as the numbers are not large and are for one year.

By adding these results of 1871 to those for the two years 1860 and 1861,* a large basis of facts is obtained ; and sufficient to enable us to determine the relative mortality of men of various ages in all the leading, numerous, and well-defined professions. The clerical work in the reduction of these census and registration tables is very great, and nothing analogous to it has yet been undertaken in any other country. The results fully justify the expenditure in the collection and analysis of the facts, which are now submitted to the hygienic student. They will repay his careful study of the mortality in its relations to the circumstances of every occupation.

The degree of confidence to be attached to the rates depends to some extent on the numbers of deaths which on that account are here given in the same Table.†

I can only call attention here to some of the more remarkable results.

The *publicans* and *butchers* it will be recollected according to the previous returns experienced high rates of mortality. As they still maintain a high position it has been thought expedient to commence the analysis by dividing them into groups ; the first group following their occupation in London, the second group the corresponding occupation in the rest of the country.

In the annexed Table the mortality of butchers and publicans is shown in comparison with the mortality of males of all classes.

Annual Mortality per Cent. among **Butchers** and **Publicans** in the Years **1860, 1861,** and **1871** at different Periods of AGE in **London** and in **England** exclusive of LONDON ; also among **Males** of **All Classes** at the same periods of LIFE during the Ten Years **1861-70.**

AGES.	LONDON.			ENGLAND exclusive of LONDON.		
	All Males, 1861-70.	Butchers, 1860, 61, 71.	Publicans, 1860, 61, 71.	All Males, 1861-70.	Butchers, 1860, 61, 71.	Publicans, 1860, 61, 71.
15—25 - -	·703	·492	·686	·727	·383	1·003
25—35 - -	1·086	1·050	1·642	·972	·996	1·407
35—45 - -	1·714	2·060	2·324	1·281	1·669	1·981
45—55 - -	2·568	2·764	3·766	1·812	2·157	2·797
55—65 - -	4·385	4·582	5·487	3·154	3·624	4·228
65—75 - -	8·283	9·062	10·383	6·489	8·121	7·068
75 and upwards	18·451	24·424	32·692	16·289	19·731	21·034

The mortality of butchers' boys and potboys is lower in London than the mortality at the same ages (15–25) of all classes.

* See the facts as to deaths published in supplement to Registrar General's 25th Report. For the numbers living see pages xl-lvi. Vol. II. of Census Report 1861, and pages xxxv-xliii. Vol. III. of Census Report 1871.

† See pages clxxii-iv.

The mortality of London butchers exceeds that of country butchers, and would no doubt be still lower if their cattle were slaughtered at public abattoirs and not in private slaughter-houses.

Young publicans (15–25) die at a faster rate in the country than in town; at all ages after 25 the mortality of London butchers is excessive; it is beyond not only the mortality of all other classes in London, but beyond the mortality of the butchers of the rest of the country.

Fishmongers experience full as high a mortality as butchers.

The numerous, useful, and as a body respectable men who supply the community with drinks, food, and entertainment in inns, are shown to suffer more from fatal diseases than the members of almost any other known class. They might themselves institute a strict inquiry into its causes. But there can be little doubt that the deaths will be found to be due to delirium tremens and the many diseases induced or aggravated by excessive drinking. It seems to be well established that drinking small doses of alcoholic liquors, not only spirits the most fatal of all the poisons, but wine and beer at frequent intervals without food, is invariably prejudicial. When this is carried on from morning till late hours in the night few stomachs—few brains can stand it. The habit of indulgence is a slow suicide. The many deaths of publicans appear to prove this. Other trades indulge in the publicans' practice to some extent, and to that extent share the same fate. The dangerous trades are made doubly dangerous by excesses.

The clergy of the Established Church, protestant ministers, Catholic priests, and barristers all experience low rates of mortality from ages 25 to 45. The clergy lead a comfortable, temperate, domestic, moral life, in healthy parsonages, and their lives are good in the insurance sense. The young curate compared with the young doctor has less cares.

The mortality of Catholic priests after the age of 55 is high; perhaps the effects of celibacy are then felt.

Solicitors experience the full average mortality after the age of 35; the legal work is hard.

Physicians and surgeons from youth up to the age of 45 experience a mortality much above the average; after that age they do not approach the priesthood in health, but differ little from the average. Many young practitioners have hard struggles to encounter. They are in contact with the sick; are exposed to zymotic disease, and their rest is disturbed. In states of depression deadly poisons are at hand. There is an excess of practitioners in cities. Country practitioners have to visit their patients in all weathers, at all hours. The causes from which the medical men suffer demand careful study.

Chemists and druggists are younger than medical men, because pharmacy is a separate business, and is of more recent growth. Their mortality like that of medical men, is high and above the average, especially in the younger ages. Manufacturers of chemicals, dyes, and colors also experience a mortality above the average.

Commercial clerks experience an exceptionally high rate of mortality. The rooms in which they work are generally close and ill-ventilated. They often stoop at their desks. They require Sir John Lubbock's holidays.

The railway service taken collectively experience a high rate of mortality, somewhat higher than medical men at advanced ages.

Coachmen (not domestic servants) and cabmen experience nearly the same high mortality as the railway service from the age of 20 to 35; after 35 the mortality is in still greater excess; the causes are probably drink, exposure to the weather, and violent deaths. The mortality of horse-keepers and grooms is, without hard exercise, nearly as high at the ages of 25 and upwards as the mortality of coachmen.

Veterinary surgeons and farriers of the age of 25 and upwards experience a very high rate of mortality; higher than physicians and surgeons.

Gamekeepers offer an example of the healthiness of out-door life; their mortality is very low. The exercise of genuine sport is no doubt as salutary to the amateur sportsman as it is to the professional descendant of the hunters of old.

Publishers and booksellers fare well in health and life; they are generally masters in better circumstances than their confederates, bookbinders and printers, including masters and men, who often work in badly ventilated rooms, and die at a rate of mortality exceeding the average.

Tool, file, and sawmakers have among them the grinders who suffer so much from sharp particles of stone and steel inhaled into the lungs; their mortality is still high, and at the ages 45 to 65 excessive. The mortality of needle manufacturers at 35–45 is excessively high.

Coachmakers of all branches working in wood, iron, binding, and paint, up to the age of 45, experience a low rate of mortality; afterwards the mortality exceeds the average. They live in towns.

Wheelwrights working chiefly in wood, and scattered all over the kingdom are healthy; their mortality is low at all ages.

To carpenters, joiners, sawyers, and workers in wood generally the same observation may be extended; their mortality is low; their occupation is healthy.

The mortality of the blacksmiths, also scattered over the country, and working in heat and iron, is higher than that of the wheelwright and carpenter.

The carver and gilder suffers less than he did. But both he and the plumber and glazier require further protection against the metallic poisons. The mortality is high among them from age 35; but at the age of 45–55 it approaches 50 per cent. higher; at 55–65 it is near the ordinary mortality of men.

The wool, silk, cotton manufacturing population no longer experience an exceptionally high mortality. Lord Shaftesbury and his enlightened colleagues must be gratified, if not entirely satisfied, with the success that has crowned their life-long labours. And it is creditable to the millowners to find the men and boys in their employ suffering less than many other people in towns.

The people working in wool are the healthiest; at all the young ages their mortality is the lowest; at 45 and upwards the cotton workers suffer much more than the workers in wool and silk.

The mercers and drapers are not so healthy a class as could be desired; their mortality is above the average, especially is this the case from 25 to 45. Perhaps much of their in-door work is better suited to women than to young men.

The hairdressers, barbers, and wig-makers, the English Figaros, living chiefly in cities, experience, according to these returns, high rates of mortality at all ages; and so do hatters.

Shoemakers at all ages, except 20–25 and at advanced ages, experience a rate of mortality below the average.

Tailors on the contrary die at rates much above the average. For their health and for shoemakers, both classes counting more than 300,000 men, much remains to be done.

Bakers experience a mortality very little above the average, and that is chiefly at advancing ages.

Grocers at all ages after 35 experience a low rate of mortality.

The tobacconists, snuff, and tobacco manufacturers suffer very much at all the younger ages; indicating clearly enough how prejudicial smoking is to young men.

They present a strong contrast at the corresponding ages to tanners and curriers who are healthy up to 45, and then show signs of suffering.

The earthenware manufacture is one of the unhealthiest trades in the country. At the age of joining it is low; but the mortality after the age of 35 approaches double the average; it is excessively high; it exceeds the

mortality of publicans. What can be done to save the men dying so fast in the potteries and engaged in one of our most useful manufactures?

Among the glass manufacturers the mortality is higher at 25–35 than among the earthenware manufacturers; but much lower afterwards.

The men engaged in copper manufactures from 20 and upwards experience a mortality somewhat above the average; at 55–75 their death-rate is heavy—much heavier than it is among the workers in brass and in iron.

The men in the iron manufactures do not die at the average rates under 45; after that age the average is exceeded.

Working in wood on the whole is comparatively cool compared with working in iron; the loss by perspiration is excessive among such men as puddlers, and they require a great deal of drink, which should contain little or no alcohol.

Taken in the aggregate the metal worker—the metallic man in all England does not experience the average rate of mortality under 45, after that age the table turns against him and his losses grow heavier and heavier every year.

Miners in the aggregate experience a heavier rate of mortality, largely from violent death, than metal workers; and the mortality of both classes greatly exceeds that of the agricultural labourer.

Independently of the influence of the material and of the work itself on health, the place in which men work exercises so great an influence that it has to be taken into account in judging of the salubrity of their occupations.

Man is naturally an open air animal; he is made to work, and the sky is his native covering. So after taking everything into account, the hunter, the sportsman, and the husbandman in a cultivated land are at present the healthiest of all workmen. All would no doubt be the better if the higher parts of the brain had their due share of activity; and this though not often the case now, we may hope will come.

The farmers and agricultural labourers are at present among the healthiest classes of the population classified according to occupation. The young farmer for some reason or other suffers a higher mortality than the labourer; but at 35 and upwards the British farmer enjoys comforts which are beyond the reach of the labourer. It is probable that in no country the agricultural population is healthier than in England. Ramazzini thus writes of the agriculturist in Italy:

O fortunatos nimium, sua si bona noruit agricolas.

So it might perhaps have been, he says, with that pristine race of mortals who cultivated the paternal acres with their own oxen, but it is not so in this age with our husbandmen, who struggle on another man's land (alieno fundo) with perpetual toils and extreme poverty. Then he enumerates their diseases,* pleurisies, peripneumonias, ardent fevers, fluxes, and other maladies to which they are particularly liable "at least," he adds, "in Italy," and especially in the region of the Po. Carelessness is one cause of their ill-health; for before the cowhouses, pigsties, and dwellings which may indeed be called augean stables, they heap up ordure to dung the fields, and keep it there "for a nosegay all summer†;" whence it cannot but be that fetid exhalations arise continually and pollute the air. In no men does the blood undergo greater changes in a short time from exposure to the weather and work. Galen denounces the air of gardens for a similar reason ob stercorationem et arborum parvos hælitus. Ramazzini notes that the country people do not bear bleeding even in pleurisies. The reapers in the Ager Romanus every year fill the hospitals

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* De morbis artificum, cap. xxxviii.

† Such is Dr. James's translation of "per totam æstatem pro delitiis." He is not often so happy, when not literal.

and it is uncertain whether the scythe of death or the lancet of the surgeon is the more fatal.

The English farmer is in a very different plight; his blood is not poor and he is not ill fed. The weather it is true troubles his mind, but against its severities he is well sheltered. His capital not being sunk in the purchase of land he has more to expend on stock, implements, labour, and fertilizing materials. His profits are greater. No doubt the dirt which feeds zymotic disease germs, cattle and human alike, still pollutes the farmyards, and the farm ponds; but foot-and-mouth disease, peripneumonias, and cattle-plague will in the end teach the intelligent farmer that in his management of all live stock cleanliness is next to godliness.

The mortality of the English farmer is not now high; but it may by care be reduced to a lower figure. To what is the high mortality of the young farmer of 15–25 due? Farmers' sons appear to be healthy. The labourer experiences a higher rate of mortality than the farmer at all ages after 35.

Conclusions.

(1.) Much of the misery of mankind admitting of removal is due to untimely death and its shadow sickness, another name for suffering, and depressed, disordered vitality.

(2.) By the laws of life no man can be certain that he shall continue in existence a single year, much less any definite number of years; but with an average constitution he may justly expect his days to be long in the land if he keep the divine commandments brought down and proclaimed by science. The complete cycle of physiological life is *a hundred years*; and the *mean lifetime*—the expectation of life at birth—under favourable conditions is at present *fifty years*. So in such a population stationary the mean annual rate of mortality is 20 per 1000; and in an increasing population, with an excess of young lives, may be 17 or 16 or less per 1000. Such rates have been attained, and rates lower still are not unattainable.

(3.) Life and death involve many variables, but they are subject to laws as explicit as the combination and the separation of atoms—the continuance and discontinuance of motion; the one or the other never involving extinction, but conversion of matter and force. Death is a necessary sequence of certain causes.

(4.) Loss of blood, asphyxia, starvation, concussion, crushing, fracture, poisons, lightning, fire, frost kill men instantly or slowly. And the dangers from all these causes can be obviated to a large extent by skilful precautions, sometimes simple, sometimes elaborate, on the part of individuals and communities, their co-operation being often indispensable; by the cultivation of peace, charity, temperance; by mothers nursing children, and by better care so that they may be neither overlaid nor burnt; by industry in acquiring the means of living; by insurance against starvation; by the regulation of rail, water, road traffic; by the ventilation of mines, shops, churches, theatres, and houses; by restricting the use of poisons, by lightning conductors, by fire-proof dresses and dwellings; by water at high pressure in every street.

(5.) Air is well called vital: breath and life are confounded. Always impure in marshes and cities, air is salubrious when it is fresh and moving. Air charged with inorganic impurities, sometimes with gas such as hydrochloric acid, sometimes with solid particles as grit and steel and smoke, irritates the air-tubes and inflames the small cells of the lungs. The gaseous impurities can be condensed, the dusty particles lessened by mechanical contrivances, the steel particles arrested by magnetic shields, the black smoke burnt.

(6.) Flour and vegetable dusts inhaled with air are hurtful but less noxious than mineral dusts: millers suffer much less than steel grinders, and their diseases come on chiefly after the age of fifty-five, when their bronchi are loaded with phlegm. The dusts in flour mills, cotton mills, shops are not easily, but should be, removed by mechanism; they are always noxious, as is evident in itself and is demonstrated by their effects on the work people.

(7.) Some *organic matters undergoing putridity in exhalations* or entering the system by inoculation poison the blood. Hence a probable cause of the high mortality of butchers, poulterers, and fishmongers. Surgeons and veterinary surgeons suffer from dissection wounds. Undertakers in full work are not healthy men. Dead animal matter appears to communicate its cadaveric changes to the living. Animal food taken in excess has its dangers to be avoided, for unquickened by digestion it is as unsafe in as out of the body.

Diseased meat is now sent to market in considerable quantities; the evil can only be obviated by public slaughter-houses, which would take away the impurities from the butcher's dwelling, and be the means of saving thousands of animals from the agonies they now suffer at the hands of the unskilful. The kind-hearted people who are so sensitive to the pain of experiments performed by physiologists on a few animals, to the infinite advantage of mankind, would do well to direct their efforts to the suppression of the cruelties of slaughtermen.

(8.) WATER is the first necessary of life; and is probably at its best when quite pure and aerated; but it has not been proved that taken in its ordinary state of hardness or slight mineral impregnation it is pernicious. Soft water is the most suitable for ablution of person, clothes, house; so it is for cooking. When the sewage of infected towns is poured into rivers the waters carry the ova of parasites, and the germs—the zymads—of some zymotic diseases—notably of cholera, and enteric fever. The storage and filtration of such river waters get rid of certain impurities; but better water is obtained from undefiled mountain streams and from deep wells. The hard chalk waters require softening by Clark's process as it is practised at Canterbury and other places, by such ingenious engineering contrivances as have been devised by Mr. Homersham. This process no doubt carries to the bottom, with the chalk, organic matters. The want of pure water is often felt in various parts of the country, and the storage of the flood waters as well as the drainage of marshes is a matter of national concern to which private possession should be no obstacle. The waters of marshes, of shallow wells, and of stagnant ponds, often polluted, if used at all, should be boiled beforehand.

DRINKS—*Cider*, *Ale*, *Beer*, *Porter*, *Wine*, *Spirits*. The fumes of fermented liquors, if concentrated, intoxicate men; and Ramazzini, nearly two centuries ago, noticed that in Modena, fruitful in vines, the people engaged for months together in the distilleries became lethargic, wrinkled, meagre, melancholy, giddy,—*veternosi*, *vieti*, *macilenti*, *tristes*, *vertiginosi*. The classes in England who deal in spirituous liquors die off, as we have seen, at accelerated rates. And the connoisseur famous for his cellar it is to be feared sometimes succumbs to the slow seduction of favourite vintages. But intoxication is now, except in dipsomaniacs, rare among the middle and higher classes. Still some workmen in certain trades and in some parts drink to excess and are the victims of intemperance. 20,121 deaths were directly ascribed in 25 years to delirium tremens and intemperance, and this is only a small portion of the deaths due to alcoholism. It is not the criminal classes,—not the wretched alone,—but even some skilful artisans that get drunk every week or oftener on spirits and drinks sometimes pure and sometimes drugged. This crime is committed in public houses, which under the circumstances are directly regu-

lated by law; but the law does not satisfy a zealous school of social reformers, who, for the protection of drunkards, propose to suppress public houses and beershops altogether. This cannot be done, and is not desirable. It must be left to the people themselves to determine whether they will take their ease in inns and clubs with companions, or drink and eat at home with their families and friends. With the progress of sanitary education the best hopes may be entertained of the future; then the artisan will be as sober as the gentleman has become in this age. The drinks of civilised men contain stimulants; and those here referred to contain alcohol. Except distilled spirits these liquors are the products of fermentation arrested at certain stages. They are parts of the fruits of the earth in solution, enter the blood readily, and with other food are a substantial part of diet. Fresh light ale is an excellent English beverage; it suits workmen in this climate as well as the various pure light old wines agree with men whose brains expend more force than their muscles. By the moderate use of such juices as Ramazzini says *mensæ et convivia hilarantur* — wine in glasses not often filled makes "glad the heart of man." All beverages have to be regulated according to climate, weather, and temperament; in the cold of winter and in high latitudes wines are salutary; in the tropics and in summer their very charms in excess are Circean dangers. They fasten like vultures on the liver. The great pending experiment of total abstinence by thousands of all classes seems to show already that men can live in health without alcoholic liquors; but whether their lives are better or worse, or will become better or worse, as age creeps on, than the lives of their fellow mortals the insurance offices will find out. Abstainers deserve to be watched attentively by the physiological student.

The dipsomaniac is a lunatic *sui generis*, and has to be treated with humanity and rational restraint.

As drunkenness is a crime, and the father of crimes, it deserves stamping, in the interests of human life, with the infamy of crime; so its penalties should be made to attach to the drunkard and to the abetting house that supplied him with intoxicating drink. This is in the interest of respectable houses. The majority of the publicans and the greater part certainly of the wine merchants are temperate, and as the mortality of the whole trade is high the mortality of the intemperate among them must be excessive. Death by delirium tremens is a low kind of suicide, and nobody is more interested in the suppression of mad drunkenness than the respectable members of the trade. The remedy is very much in their own hands. Any loss of revenue by a maximum duty on raw spirits, often foul with fusel oil, will be a gain to the health of the nation. Future generations will share in the gain.

Non-alcoholic Drinks and Vapours: *Tea, Coffee, Cocoa, Tobacco, Opium.* No deaths are ascribed in the registers to excesses in any of these articles, and there is reason to believe that the three beverages afford salutary subsidiary diets. In excess tea shakes and saps the nervous system. Drunk by women, largely without food, it is certainly prejudicial. Opium taken habitually, solid or in smoke or in solution, is in the end fatal. The Chinese are now the chief opium smokers, and it is to be regretted that Englishmen have aught to do with the supply of the drug. Tobacco smoked sparingly is beneficial to some, in excess injurious to all. It is poisonous to some of the people who work in it, and boys and young people smoke nought but evil through the pipe.

Food: *Flesh, Milk, Bread, Fruits, and other Animal and Vegetable Products.*—The people of England are probably as well fed as any people in Europe; and when it is considered that, to use a Chinese term, there were more than twenty million mouths to be satisfied several times every day during the ten years with great varieties of food, won with much

labour in the fields here, or imported thousands of miles from abroad, this must appear no easy task. Among them were helpless infants by thousands, sick men, infirm women, imbeciles, vagrants, men out of work, aged patriarchs past work, as well as the robust, industrious, intelligent millions; and it is evident that as the food has to be provided by every family every day it cannot under all circumstances be supplied in the quantities or the proportions required. The lamp of life goes out without oil, and men perish by famine, or, as Ugolino did, by sheer hunger. The absence of the due amount of vegetable and animal matter induces also several diseases which are returned as the proximate causes of death. Infants require their mothers' milk, thousands die for want of it. This may be supplied in many cases, in others substitutes may be found. Fruits, salads, and potatoes contain the several vegetable acids which are an indispensable part of diet; in its absence after the potato failure in 1847 the population in many places became scorbutic. The potato, fruit, and winter vegetables now save the population from the scorbutic degeneration which formerly led to the excessive fatality of zymotic diseases. Deaths from scurvy sometimes still occur at sea in the merchant service. But the deaths from scurvy and purpura together on land do not exceed 360 annually. This acid diet demands attention. Its absence lends fatality to certain diseases. The deaths now ascribed in all England directly to privation are at the rate of three every fortnight, seventy-seven annually, the gentler sex dying of starvation in smaller numbers than men. Without the institution of poor relief—imperfect it may be, but still admirable and English—the deaths from starvation would amidst all the chances of life, badness of seasons, the fluctuations of trade, amount to thousands a year.

On wheat, rye, oats, rice, or potatoes, with vegetables, salt, and a few adjuncts, whole tribes of men live and flourish; but they cannot do a full amount of work without animal food, which should therefore be provided whenever it can be obtained in moderate quantities. By some at feasts and at the tables of the affluent too much is eaten; hence, though their numbers are fewer, the deaths of the wealthy and their servants ascribed to gout greatly exceed the deaths of the poor by starvation. The deaths by gout are nearly six weekly,—two hundred and ninety-nine annually.* All these deaths are not due to actual excesses in food, but to untoward combinations; some are due to wine or ale, and others to hereditary taint. But stomach, liver, kidney diseases are all swollen by—are all latently the result of—excesses of the table. Obesity in excess is a disease. The remedy is in temperance.

Food consists of carbon and nitrogen, the first abounding in vegetables, the second formed in plants but accumulated in animals, in combination with oxygen, hydrogen, sulphur, phosphorus, potassium, sodium, iron, and other bodies. Starch, sugar, and butter are types of the carbonaceous—vermicelli, lean mutton, white of egg, of nitrogenous food. These elements are consumed in the body in proportions varying with the work. Thus Dr. Playfair† estimated the amount of carbon consumed daily by a man in perfect quietude at seven ounces, active and in full health 12 ounces, in hard work at 14 ounces; the nitrogenous food varies still more among the various classes. Chemists agree that there is a very direct relation between the muscular work, the heat, and the carbon consumed. About the relation between work done and the nitrogenous food transformed into urea chemists are not agreed. But experience has shown that at hard work horses and men require oats or meat, that is nitrogenous food, in large quantities. This nitrogen, which with carbon in gun cotton, gunpowder, and nitro-glycerine developes such explosive forces, is also the

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* The deaths ascribed to gout were 7,467 in the 25 years 1848–72.

† The Food of Man in relation to Useful Work, by Lyon Playfair, C.B., LL.D., F.R.S.

factor in the production of vital force ; but food burns to produce force and heat in variable proportions according to the demands of the organisms in various climates.

HEAT AND COLD.—In the tempered climate of England a few men in summer die of sunstroke, and a few stray wanderers in winter nights are frozen to death ; but the numbers of such deaths are inconsiderable. Upon the other hand large numbers of both sexes and of all ages die of diseases induced by extreme heat or extreme cold, the heat diseases specially affecting the digestive, the cold diseases the respiratory, organs ; the deaths by diarrhœa and bronchitis, prevalent types here, bearing a constant relation to the higher and lower temperatures of summer and winter. Cold exhausts the sufferers from chronic disease. Clothing and firing are the natural protection against cold, which is most intense and most fatal in the night when the fires go out. Much may be done by economy of fuel now sent into the atmosphere in smoke. In India alcohol cannot be endured, and the soldier's head, instead of being cropped, requires the protection at least of his hair. The back of the neck, over which the hair should hang, is immediately over that key of life the *medulla oblongata* and the top of the spinal marrow. This in winter requires the protection of the hair against cold as much as the throat. The original reasons for cropping the soldier's or sailor's hair short should no longer exist.

Children suffer much from radiant sun heat against which they should be protected : the fatality of cold follows this law—when the temperature falls below the freezing point of water the mortality at all ages rises above the average, and if the degrees be expressed by 1 in 1000 at the age 20, it becomes 2 at the age 29, 4 at 38, 8 at 47, 16 at 56, so doubling every 9 years. This must be taken into account by men and women as they advance in years ; warmer clothing, fires, exercise, and more food are wanted in winter than in summer weather, in old than in young blood.

By EXERCISE is generally understood muscular effort of some kind ; it may be labour, it may be speaking, it may be sport, it may be of a few, it may be of all, the voluntary muscles ; it is always action, and in the scientific sense always work. The muscles contract under the influence of currents from the nerves, so that exercise implies action of the nervous centres ; but the brain, spinal marrow, and nerves have besides special conscious functions of their own. Exercise of the muscles is one thing, exercise of the brain another, as different as motion and thought. Both kinds of exercise affect health and life. Death is rarely if ever ascribed in the registers to the strain of muscular effort, while it is at times ascribed to mental shocks and disorders ; but the athletic state, the result of training, was held by the ancients best acquainted with athletes to be dangerous. It implies an unusual tension of brain, heart, lungs, and digestive organs as well as muscles, and a main point to which much is sacrificed is the reduction of the bulk of the abdominal organs so as to give the breathing, by which oxygen enters, the freest possible play. On ascending hills the breathing grows quick, as every one finds, to take in more air ; the heart beats faster to circulate that air and the blood through the nerves and muscles. The food of working men as well as animals bears, in the long run, a strict relation to the quantity of work of every kind they perform ; and this work by the ingenuity of mechanical science can be measured, and expressed in weights lifted through space, the scientific unit being a kilogram lifted a metre high ; thus Dr. Playfair estimates the average work of a man at 105,605 * metre-kilograms, which is nearly equivalent

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* Food and Useful Work, p. 12.

to the work expended in lifting 106 metric tons one metre high ; 340 tons one foot high. Such a full day's work is equivalent to a daily walk of 20 miles. The soldier in war carrying 60 lbs. 14 miles a day does nearly the same amount of work. The London policeman walks 16 to 20 miles in 8½ hours. Twenty miles a day with rest on Sundays is a full day's work for a postman ; with more he breaks down. Many men overwork themselves ; and many children are overworked with the worst effects on their future life ; some women too are overworked in pregnancy and underfed. Domestic servants are healthy because they work and are well fed ; they have to subside to lower diet when they marry and have children. Some women of the higher classes do not take exercise enough, even in England, where women have more out-door exercise even up to hunting than women on the continent. Girls at school through want of out-door play are less healthy than boys.

The brain—the organ of the intellect and the feelings—requires exercise as well as the body ; and its adequate exercise preserves the play of health. It may be overworked, and it requires a special diet, with adequate supplies of the albuminates, and fats, and phosphates.

Chemical force from reaction between the organism and food and oxygen yields by transformation heat as well as cerebral and motive force. There is thus a strict relation between exercise, heat, and the products of chemical action—between the evolution of carbonic acid, urea, and animal heat.

To avoid waste of food and of digestive force and to maintain health the quantities of the various kinds of food, consisting of nitrogen and carbon, of flesh, fat, sugar, starch, and salts, have to be adjusted to the different kinds of work. This can only be definitively learnt by experience. Hippocrates justly insists on immediate attention to the first symptoms of excess or of defect in food or in work, both excesses incompatible with health.

Food and work are undoubtedly important factors in determining the lifetime of different professions, of various artificers, and of laborers. The Tables here appended will assist the student. In judging of the amount of work, its kind, its continuance, its intermittances have to be taken into account. Thus Rankine reckons that a man can do three times as much work by pulling horizontally as he can by hammering. Haughton, measuring by urea, finds that high mental and mechanical work demands a better quality of food than routine labor.*

It will be instructive to study the food, drink, and work, and health of the clergyman and barrister ; of the watchmaker, tailor, weaver, shoemaker, hairdresser ; sawyer, carpenter, blacksmith ; of the laborer who works out of doors ; and of the cabman who drives about in the open air in all weathers.

Diseases are produced by the excessive exercise of particular muscles ; thus the fingers of the nailer and of the scribe become paralysed ; the clerk's chest is pinched by low desk work ; some literary men overwork their brains into dementia ; the stooping laborer sinks into crooked vacuity. Nearly all these evils admit of alleviation, or under rational treatment of prevention. Sitting, standing, stooping have all to be varied. Ramazzini reminds his *statarii artifices* that the fatigue of standing is due to the continued tension of the same muscles, whereas nature delights in alternating intermittent action ; they might experience some relief, he tells them, by various expedients, such even as by standing by turns on one leg, as they see birds stand, in conformity with the principles of his mathematical friend Borelli.

Excreta.—Meat and drink are converted by the body and brain at work into carbonic acid and organic exhalations which escape by the skin and

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* Playfair, Food and Work, pp. 4–5.

lungs; into urea, and into fæces; these are all poisons to man, and by an eternal ordination of nature have to re-enter life after purification in the atmosphere and the soil.

In a dense population they do not go away of themselves; as the acquisition of food costs money so does the removal of its refuse. The sweat left on the healthy brow breeds disease; the body must therefore be washed, or its distillations infect the blood. The leprosy of the middle ages was aggravated, if not caused, by the dirt of the mediæval world. Breath charged with carbonic acid, vapor, and exhalations caused the madness and deaths in the Black Hole of Calcutta; and breath pollutes the air in crowded rooms, churches, theatres, cities. Nature herself in the sense of smell expresses her abhorrence of cesspools, privies, and foul sewers. All these excretions in disease become doubly infectious; they contain zymotic matter.

The removal of refuse then demands as much care as the acquisition of food; and however costly it may prove, this removal is a necessary part of the economy of every family—every community.

The *breath* is swept clean away by ventilation, if due space and adequate mechanism are employed.

Soap it has been well said is a civiliser. Ramazzini, who was a real lover of workmen, begs them to make themselves clean. "The public baths of ancient Rome," he says, "were of the utmost use to artisans engaged in dirty work;" who could at the same time wash away sordid impurities and refresh the wearied body. "Admirable as the public baths "were, they are now obsolete; so I recommend ablution of their bodies at "home, that they may appear in public with a clean skin and clean clothes, "at least on Sundays and festival days. It is wonderful to see how much "the animal spirits are cheered by cleanliness and purity."*

This precept is enforced by the grievously high mortality of workmen in cities, which cannot be accounted for without referring to sordid skins as one of its main causes. They have often hitherto been without sufficient water even in London; but that want will soon be supplied, and it will be possible for them to wash at home and be clean from the leprosy of dirt. Colliers in the north wash themselves all over daily on returning from work.† Baths and washhouses should exist in every district. The shower or sponge bath, requiring less water than the ordinary bath, may be used every day. Great employers in factories might by some cleverly contrived mechanism enable great numbers of their heated workmen to wash away the sweat and dirt of the day in shower baths with *warm* water as the most cleansing, and easily administered to great numbers at once.

Sewers now carry away the chief fluid and solid excretions and refuse of houses in towns. The fittings of closets, the detachment of sinks, the ventilation and the outfall of sewers offer the great sanitary problems of the day. The mixed system of sewage irrigation on suitable land under skilful management, with the discharge only of superfluous water into such rivers as the Thames below London, is actually the most practical course. Definite prohibition of the sewage pollution of the Thames and other rivers by towns above the intakes of the water supply is indispensable; the sewage must all pass through the disinfecting land or artificial filters before its flow into the water-supplying streams.

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* The reason Ramazzini alleges for the disuse of the public baths of Rome, so useful in preventing and curing disease, is curious. "Sed quoniam Christiana Religio animorum "potius, quam corporum sanitati intenta, passa est paulatim obsolescere balneorum "usum; tam salutari præsidio in omnibus penè morbis, nostrorum temporum destituta "est Ars Medica." Such considerations happily do not hinder the English clergy from attaching due regard to their own health, and to the health of their flocks.

† Mr. W. Lisle, Superintendent Registrar of the Durham district, confirms this statement.

ZYMOTIC DISEASES.—In small-pox certain matters are produced which, inserted on a point under the skin, multiply themselves, and infect the whole body, which reproduces a crop of the same kind. The infecting matter of small-pox floats in the air, and enters the body with the breath; it multiplies itself, whatever may be the channel of entry, in the same way; and the new matter will produce the same changes in any number of other men. Each infection induces diseases of its kind. All men are not susceptible; the specific germs (zymads) will not live in their bodies; this is notably the case with those who have already undergone infection. In cholera and in enteric fever (typhia) the germs from the intestines, in England, enter the system through the intestinal tract. In hydrophobia and syphilis, the germs only enter the blood by inoculation. Zymotic diseases prevail endemically, epidemically, pandemically; but follow certain laws of increase and decrease in their evolutions. Other diseases, like ague and famine fever, and some dietic diseases are grouped for convenience in the same class.

Leavens it has been long observed are capable of reproducing themselves in a suitable medium; and from this analogy the zymotic class of diseases is named.

The seeds of these diseases enter the body by inoculation, by contact, by ingestion, and by inhalation. Many of the diseases are contagious and infectious.

The inoculation diseases, such as hydrophobia and dissection wounds, are arrested by removing or destroying their germs before they enter the blood and tissues around the wound. The skin infections by contact can often be removed by ablution, even if there be epidermic abrasions.

When the cholera matter has entered the intestinal tract by water, or other means, it induces diarrhœa, which can generally be arrested by sulphuric acid drinks and other remedies. In cholera epidemics the people are so unaccustomed to this peculiar affection that they neglect it; and experience proves that house to house visitation by competent persons is indispensably necessary to secure the treatment of the disease in its first stage, when medical treatment is most efficacious. Perhaps enteric fever and dysentery might also be arrested before the infection fastens on the mucous membrane; but the experiment has not been tried. In both diseases there is a prodrome of a few days; and when there is enteric or dysenteric diarrhœa it may in time be identified, and treated by the skilful physician. There are also other signs premonitory. Whenever the patient has taken impure water prophylactic treatment should undoubtedly be tried.

The air, which Professor Tyndal shows in his elegant experiments carries dust, carries in it also the zymotic particles (zymads) of small-pox, scarlet fever, diphtheria, measles, whooping-cough, typhus, and plague in the atmosphere that surrounds the sick: in other cases it carries the widely diffused elements that induce influenza, marsh fevers, neuralgia, and rheumatism. These zymads are attacked in many ways: (1) by the free admission of fresh air (ozone) into the chambers of the sick; (2) by the various disinfectants—such as camphor, carbolic acid, permanganate of potash (ozone), chlorine, sulphurous acid; (3) by the isolation of the sick during the infectious period in separate rooms or separate dwellings; (4) by the chemical destruction of the excreta; (5) Pasteur showed by many experiments that organic germs which set up fermentations are arrested by their aspiration through cotton wool, and by analogy some persons might be disposed to try the effect of breathing through cotton wool when they enter sick chambers.

VACCINATION.—Every child should be vaccinated at the proper moment with pure lymph.

Some of the zymotic diseases occur as a general rule only once in a life. I say as a general rule, because every known disease, when not fatal, does

occur occasionally more than once in the same person; thus of 10,000 persons that have had small-pox, or scarlet fever, or measles, one or more may under given circumstances experience a second attack.* The mild as well as the severe forms possess the protective power; and advantage was taken of this principle in inoculation. Vaccination the world owes to Jenner. This is the position of an ordinary child after vaccination; he is as a general rule protected against an attack of small-pox, while in the possible event of his defence failing, his life is still guarded against the worst types of the foul malady. The danger a child incurs from vaccination is quite inconsiderable, when the operation is skilfully and opportunely performed by a surgeon. What is the position of an unprotected child? He is every year of childhood liable to attack and death by small-pox; should he fortunately escape through youth, he will probably be assailed in manhood when a family depends on his life. Should he desire to insure his life, the insurance office meets him by asking if he has been vaccinated. If he recover from small-pox the face is disfigured, the eyes sometimes blinded, the ears deafened, or some constitutional disease is awakened; and any diminution of these risks of mutilation by small-pox is worth purchasing by vaccination.

It is urged that common vaccination does not yield absolute security against death by small-pox; this is true; and it is equally true that it reduces the risk to a low figure. It is also true that in several instances the diminution of the mortality by small-pox has been accompanied by a contemporaneous increase of the mortality by other zymotic diseases. If children are allowed to be killed by small-pox they will not die of other causes. But vaccination does not induce any other zymotic disease; and had small-pox been allowed to rage to this day it must have increased the general mortality. Take by way of illustration several families of children living in the most favorable conditions, and if you introduce scarlet fever it is probable that one or more of them will die. If left unvaccinated, small-pox will be still more fatal under similar circumstances.

If on the other hand many families are ill fed and scorbutic; if they are dirty, in single rooms; crowded in a rookery of London, or a wynd in Glasgow; exposed to all the zymotic influences; their protection by quarantine, vaccination, or any other measure, against any one malady, might have little or no effect on the mortality. Should these evil influences grow stronger as the population grows denser, the advantages of vaccination will be countervailed.

Vaccination is now enforced by legal penalties, and is administered by public officers.

And singularly enough a small band of well-meaning men, to the great distraction of the untaught, are agitating for the abolition of the compulsory law, and for the abolition of vaccination itself, not because, as was once contended, it is sinful to thwart nature's laws, but because vaccination is fatal, is ineffectual, and is the means of propagating odious diseases. A lady of distinction loses her child by erysipelas after vaccination, and the cruel loss leaves indelible impressions on her mind.

A clever barrister, in addition to the usual arguments, tells us the army standard is obliged to be lowered; millions have been expended on sanitary works, but the mortality among children in St. Pancras workhouse last year reached 215 per 1000; "the good has been more than swamped by "the medical curse:" "a clergyman in Suffolk says he knows three ladies

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* De la Condamine estimated the recurrent cases of small-pox at 1 in 10,000. Louis XV. of France is said to have died of recurrent small-pox in 1774 at the age of 64, after having undergone that disease casually when he was 14 years of age. After careful inquiry into all the recorded facts, Dr. Gregory was convinced that the king never had had small-pox in early life; the primary attack was varicella. He contends that similar mistakes occur in other cases. See his excellent lectures on Eruptive Fevers, pp. 73-5.

"syphilised, but does not give their names." Mr. G. S. Gibbs, a zealous anti-vaccinationist writes:—"I was vaccinated in 1829, and caught small-"pox in 1850, much to my astonishment; but what was the result? I "was ill for many weeks, and for many days recovery was despaired of—"*the horrible disease* [*small-pox!*] *had its full course*—so that for myself "I have no feeling of gratitude to Jenner." To these sad experiences many more may be added; but there are innumerable examples of happy issues, and millions of all nations have reason to call Jenner blessed. We are bound to take all the facts into account where the nation's health is concerned. And the legislature, while sympathising, as everybody must, with cases of accidental hardship, consults in its acts the public good. The Registrar-General never advocated compulsion; as he believed English parents would in the end, with the progress of education and reason, voluntarily place their offspring under the ægis which the discoveries of medical science have provided against small-pox.

The legislature in its acts, be it remembered, did not compel any parent to be vaccinated himself; it only compels him to afford his helpless child, at the public expense, the best protection available against a dangerous disease. The Roman father had by Roman law the child's life at his disposal; but such power was never claimed by English fathers, and never conferred by English laws. The child belongs to the nation; and the parents are bound to provide for its safety.

The Registrar of births is instructed by the Registrar-General to give the father, mother, or custodian of the child notice to have the child vaccinated by the public vaccinator or some other medical practitioner. The penalty is twenty shillings for neglecting to take the child before he is three months old, unless he is in an unfit state, to be vaccinated, or after vaccination to be inspected.*

ENTHETIC DISEASES. *Syphilis* is so injurious to the human race, that to communicate it is to commit a criminal offence; for the disease infects the blood of one and at times of two generations. Against its spread, the chief reliance must be on the enlightened conscience of individuals, but communities can also by throwing open wards of hospitals to willing patients, withdraw many victims from the field; and to shut up ascertained sources of infection in medical retreats is just, humane, and necessary. If this be done, as medical history saw the rise of the worst forms of this evil, it may hope to record their decline.

The discovery of the western world established a connexion between two populations that had been living apart for an indefinite time, and it might have been inferred à priori that in conformity with a hygienic law their specific diseases would be interchanged. This happened on one side without doubt, and on the other probably. Europe gave America its variety of small-pox, which proved destructive alike to the populations of Hispaniola (Hayti), Mexico, and North America. In 1492 Columbus discovered the West Indies, visited St. Salvador, Hayti, and Cuba, full of a gentle, fair, poor, naked population. In April 1493 the great navigator returned to Barcelona, and in June 1494 syphilis was raging in that city.†

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* See forms of certificate supplied by Registrar-General. On the general question see the able and exhaustive report of J. Simon, F.R.S., in Papers on Vaccination, 1857, and the articles on Small-pox and Vaccination by Mr. Marson and Dr. Seaton in System of Medicine by Reynolds. See also Curschman's article on Small-pox in Ziemssen's Cyclopædia of the Practice of Medicine. The Vaccination laws are criticised in a letter to Lord Lyttelton by T. Baker of the Inner Temple. Mr. G. S. Gibbs, in his letter to the Registrar General on this question: Does vaccination mitigate small-pox? responds in the negative.

† Cyclo. of Medicine. Edited by Ziemssen. Article Syphilis, by Bäumler, Vol. III. pp. 5–19.

The disease prevailed in its most virulent form all over Europe in 1496; and it justly created universal alarm, as it attacked at the source of life all classes of people, sparing neither crowned heads nor cardinals. The army of Charles VIII. carried the disease back with it after the conquest of Naples; and in France it was named the Neapolitan disease; while other countries out of compliment to that gallant nation christened it *Morbus Gallicus*. Fracastorius called it syphilis in his classical poem.* That the epidemic broke out after 1493 admits of no doubt; but the two forms of enthetic disease had long existed, and were contagious in Europe; they both became very prevalent among the profligate after the Crusades. The old disease probably bore the same relation to epidemic syphilis as summer bears to Asiatic cholera. Sprengel† exaggerates the effects of the Crusades on the morality of the male population, as he certainly exaggerates one of its causes, when he says that "*alors on comptait presque généralement sept femmes contre un seul homme.*" His authorities are good for asserting that convents were multiplied; and that the manners of the inmates under the control of the church were by no means unexceptionable. He signalizes the religious order of Fontevraud, the *Filles Dieu*, the secular order of *Femmes ambulantes*, who resorted to cities where fairs, diets, and councils were held, and waited upon the clergy under the name of *belles femmes*. The church or the magistrates had the surveillance also of the numerous houses of ill-fame, which down to the days of Luther were, Sprengel asserts, as numerous as the inns of his day. In Southwark the houses under their lord, anciently eighteen in number, were reduced to twelve in the reign of Henry VII. In Provence women chose their own mistress (abbadesso); in Southwark they had a master who held under the bishop of Winchester. The regulations offer the first recorded traces of an attempt in England to suppress the dread disease, even then, before the Spanish importation, called perilous. W. Beckett, a surgeon, in his paper published in the transactions of the Royal Society,‡ says: "I find that, as early as the year 1162 divers constitutions "relating to the lordship of Winchester, being also confirmed by the "King, were to be kept for ever, according to the old custom that had "been time out of mind." No stewholder to keep, it was enjoined, any diseased woman. The Title of a Book written on vellum about the year 1430, and preserved in the Court of the Bishop of Winchester, "whose "palace was situated on the Bankside near the stews," runs thus:—"The "Ordinances, Rules, and Customs as well for the salvation of Man's Life, "as for to eschew many Mischiefs and Inconveniences that daily be like "there for to fall out * * *." Under the article *De his qui custodiunt mulieres habentes nefandam infirmitatem*, the stewholders had to pay the lord a fine for each offence of 100 shillings. This was the English Institution. The French system existed in Avignon in 1347; in that city *il etait d'usage de faire visiter les filles tous les samedis par un chirurgien.*†

It is difficult now to understand how the church could be mixed up with such an institution; but in the East as religion made the slaughter of

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* Fracastorius, 1483–1553, was named by Paul III. physician to the Council of Trent He predicted that the plague would speedily attack that city, and to the great satisfaction of the Pontiff, induced the Council to go to Bologna in April 1547. He was one of the first in the school of Latin poets that flourished in the age of Leo X. He describes the reigning disease, and commemorates in a typical case the death of a young man that lived on the Oglio near Lago di Isco. Lib. 1. 382–412.

† Histoire de la Médecine, translated by Jourdan, vol. II. pp. 376–378.

‡ Vols. xxx. and xxxi. Transactions of Royal Society. Beckett, by an error which he shared with Sydenham and John Hunter, assumed that the two forms of enthetic disease were identical. He renders it exceedingly probable that many cases of so called leprosy were syphilitic.

animals sacrifice, it made the services of Venus worship;* and the heads of the Roman Catholic Church, as well versed then in all the turns of human passions as physicians are now—despairing of their extinction, took into its own hands in some places their regulation†. It is important even now to note the essential principles of the church regulation: (1) no single woman had to pay more than 14*d.* a week, or to be kept against her will if *she would leave her sin.* That was her protection: (2) The holder was "not to keep open his doors upon holy days," nor "to keep any woman that hath the perilous infirmity," as it was called. That was the protection of the public.

After the Reformation the church ceased to exercise any but moral control over the sinful. The bishops following in the steps of Cranmer married.

Medical statistics showed how largely the efficiency of the army and navy, in peace even, is interfered with by the two forms of enthetic disease. And Parliament established special hospitals and police regulations in garrison and seaport towns under the Contagious Diseases Acts. The Acts of 1866–9 were no sooner in full operation than they were opposed, and in 1870 a Royal Commission was appointed to inquire into their administration and operation. The evidence fills a folio volume, and is full of interest. The evidence before the Lords Committee (1868) is of great value. Dr. Graham Balfour gave in returns to the Commission, showing that the mean strength of the army in the United Kingdom during the ten years 1860–9 was 78,276; that 23,707 men were admitted into hospital annually for enthetic disease; while the constant loss of service was 1531 men, equivalent to two and a half regiments. Of 1000 strong 303 were admitted annually for enthetic disease: 20 were constantly in hospital, the sick in hospital from all causes being 48. The returns of deaths by syphilis in the army are imperfect, as the slow secondary forms will be carried out by invaliding.

It is probable for various reasons that the civil population may not suffer to the same extent as the young unmarried services; but the registered dead from syphilis during 26 years‡ were 31,860; of whom 22,269 were infants under one year of age; 24,253 were under five years of age, only 95 were 5–15. Men and women of all ages after 15 die in increasing numbers. The average annual number down to 1873 of deaths of children under 15 was 936; of adults 289. The registered deaths increased during the whole period; in the year 1873 the deaths by syphilis were 1843; 1499 at ages under 15, 344 at adult ages. Of the adults 166 were men, 178 women. To the men's deaths, 235 deaths in that year by stricture, generally consequent on gonorrhœa, must be added.

The knowledge of secondary syphilitic diseases is more extended than it was; and more cases are distinguished; still in the present day many diseases with syphilitic taint are returned by medical men under local diseases. Sir William Jenner is of opinion that syphilis stands very high among the most fatal diseases that we have in this country; with this Sir James Paget agrees substantially; "it would be very difficult," he says, "to overstate the damage that syphilis does to the population."§

The Royal Commission go explicitly against "periodical examination;" which cannot be sustained over these islands; while they would commit offenders to certified hospitals, and retain them until they had recovered,

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* See Herodotus, I., 199.

† Gœthe's ballad Der Gott und die Bajadere is based on the Hindoo Faith. The Church perhaps felt like the God.

Der Göttliche lächelt; et siehet mit Freuden.
Durch tiefes Verderben ein menschliches Herz.

‡ 1848-73.

§ Evidence before Lords Committee, 1868, Q. 1085 and 2642.

or at least for three months. Under this *modified* form the measure should be extended to London, and to all the great towns; where adequate hospital accommodation is provided by the local authorities. If this be done the plague may not be staid; but it will be reduced within narrow limits. And morality, it may be hoped, will be inculcated by higher agencies than enthetic diseases.

> Æneadum Genetrix, hominum divumque voluptas,
> Alma Venus *

herself, who sometimes fled to Paphos, could scarcely take offence if her wounded votaries were withdrawn from conflict; nor could Mavors hardly for his sons ask the State to organize a universal armed surveillance over the women of England.

CHILDBIRTH.—This is a physiological function for which nature has provided; but nature is sometimes at fault, and here obstetric art steps in with all its modern resources to aid nature. The problems are of the highest, and their solution sometimes involves the sacrifice of the child for the salvation of the mother's life. Such cases are rare. The midwife is an old English institution; but hygienic as well as obstetric art has advanced so far that to do her duty, she has to go through a regular course of instruction, to which any ordinary woman is equal; and for this facilities must be offered all over the country. Miss Nightingale's Notes on Lying-in Institutions should be consulted; her sketch of a school for midwives and midwifery nurses is quite practical.

In some parishes the delivery of a woman is a domestic event, and only a neighbour or relative is called in: deaths and injuries are at times the result of mismanagement. But many even among the poor population of villages are attended by medical men; from 30 to 90 per cent. are attended by midwives, often ignorant, often incompetent, and unable to deal with any difficulty.† In Wales, Lancashire, Yorkshire, and the Northern Counties, the mortality in childbirth exceeds the average.

The introduction of the midwife or skilful accoucheur by a sort of antinomy, is attended with dangers to be particularly guarded against; a fever attacks puerperal women, and that fever of a most contagious kind. It spreads from bed to bed in lying-in hospitals. It is conveyed by the nurse, the midwife, the accoucheur in private houses, to other women, and kills them. It adheres to the clothes, and retains its fatal activity for many days. Of this fever 1138 mothers died annually in the 25 years 1848–72. Recently in South London a practitioner, up to the time quite successful, attended 7 women; 5 died between June 10th and 19th. He took every precaution, as he assured me, and went away to a watering place, where he lived for a month in one of the best hotels. After his return, the fifth woman he attended died. Washing in disinfectants, and change of dress are properly practised. But there appears to be no absolute safety except in abstention for a time from midwifery practice; nor can accoucheurs safely attend patients suffering from erysipelas, or scarlet fever, which communicate puerperal diseases as fatal as the fever.‡

In Wales (1873) to 10,000 births, 21 mothers died of puerperal fever, chiefly from infection; 35 died of the other casualties of childbirth, some of them from bad midwifery; in London the corresponding deaths are 28 and 24, the fever being more, the casualties less prevalent.

LOCAL DISEASES.—The body is a confederation of organs; some of which may be out of order for an indefinite time without causing death. The brain,

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* Lucretius.

† Report of Committee of the Obstetrical Society of London, 1870. See Trans., vol. xi.; and Registrar General's 34th Report, pp. 225–229.

‡ Report of a remarkable discussion at the Medico-Chirurgical Society, opened by Mr. Spencer Wells, in Medical Journals, 1875.

senses, heart, lungs, stomach, liver, kidneys, limbs, joints, and skin have all their respective infirmities, which demand special hygienic treatment; their several dangers emerge at different ages, which are designated in the tables.

Some local diseases are more prevalent than others in particular places, and the present series will enable hygienic inquirers to prosecute the studies opened by Mr. Haviland, and illustrated by an interesting series of coloured maps, showing the relative prevalence of heart disease in every District of England and Wales.

Cities.—The sites of cities have an important influence on their salubrity. Experience has shown that the best foundations are above the seas and rivers at flood level. They should not be in the midst of marshes. Cities want pure water daily, and ready means of getting rid of fluid and solid refuse. Still they must, nearly all of them, be situated conveniently for commercial or manufacturing purposes, otherwise they could not command the necessaries and conveniences of life; and in such cases should the sites be unfavourable their disadvantages may be lessened if not obviated by art. The metropolis, naturally the home of the intellect, the wealth, and the aristocracy of the Empire, has its temples, palaces, and grand public buildings; and it has besides, out of regard to its own safety and greatness, houses suitable to the families of workmen. It has hospitals for the sick poor; homes for the infirm; refuges for the casually unfortunate; places of reclusion for the insane. But it requires no harbours for criminals; no rookeries for the wilfully idle, drunken, and degraded. It does not want them; they infest its pure population with vermin, and zymotic diseases; it only accepts as fellow citizens the men who consent to abide by its hygienic laws. The other cities of the Empire have all their distinct functions; and they are all equally bound to provide for their own salubrity.

If they cannot all be such model cities as Dr. Richardson eloquently sketches in his *Hygiea*, they can in many ways approach its essential outlines.

The value of land increases so rapidly in the midst of flourishing cities that families are, by the rise of ground rents, driven out of old haunts. Railways, coaches, and omnibuses enable many of the middle classes to live in the open suburbs, although rents there are high and food is dear; but workmen are put to many straits, and their families are crowded in old dilapidated houses. The evil is great, and it seriously affects the public health, as the Royal College of Physicians has pointed out. The recent Act will enable the municipalities of large cities to deal with this evil.* It gives them power to take possession of unhealthy property, and to provide for the erection on it of healthy dwellings. The Shaftesbury Estate, the Peabody Trust, and some of the excellent building corporations will contribute by their energy, intelligence, and enterprise to the success of the national undertaking to provide industrious workmen with decent dwellings at first cost.

If young municipalities at home or in the colonies acquire, as the City and Companies of London did, possession of part of the municipal land, they can, as ground landlords, regulate the kind of buildings most suitable to the wants of the population, and at the same time from the rise of ground rents relieve the rates. Should they, in addition, from the first undertake the supply of gas and of water at the rates now charged in London, no other rates would be needed of any kind for sewers, streets, police, elementary education, or science and art schools. The rising rents and the two rates would provide ample funds for public purposes.

West and north of the City land is increasing every year in value. Much of the ground of the metropolis is in large estates belonging to landlords on

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* Artizans Dwellings, 38 & 39 Vict. c. 36.

whose enlightened patriotism the country can with confidence count. They have the power of doing more in the way of providing healthy dwellings for artisans and men of small means than many municipalities.

In laying out new streets, as well as in opening up old blocks of houses, the importance of depresssing density of population within definite limits must be kept constantly in view. The mechanical difficulties of supplying pure air grow insuperable in crowded courts, cellars, and houses. Ornamental parks, planted squares, open playgrounds, and wide streets to catch the sunlight, or to carry the breezes into every quarter, will conduce to the health as well as the beauty of the town. The grand architectural effects of the narrow lofty streets of the Continent are not to be desired; they will be dearly purchased by an unhealthy population.

THE DEAD.—*Embalming, cremation, inhumation; vaults, churchyards, cemeteries, urns.*— Embalming seeks to meet the fond wishes of men who have lost any beloved object; but the attempts to preserve the body perennially after life has fled have hitherto proved failures. Nature forbids it. The mummy of an Egyptian king is a sorry spectacle. Morini's petrified bodies are not pleasant to look at. Cremation has recently been proposed in Italy by Brunetti of Padua, and in England by Sir Henry Thompson, who describes its advantages.* In the case of deaths by plague, small-pox, typhus, scarlet fever, and other zymoses, cremation, no doubt, destroys for ever the germs of disease, and restores the organic elements to the atmosphere. Flame is the last visible state; the ashes are collected in the funeral urn. Burning the body was once common among the Aryan nations. Germans, Tacitus says, burnt their dead,† as the Hindoos do; and the Greek and Roman funerals by fire figure in the poems of Homer and Virgil, who describe them in grand epic pictures. Sylla was burnt, so was Julius Cæsar. Modern science offers methods quite unknown to the ancients for converting the elements of the body, not quite into carbonic acid, water, ammonia (Sir Henry Thompson's, CO_2; HO; NH_3), and white ashes, but into simple elements or inorganic compounds. Sir Henry saw two bodies reduced in a reverberating furnace to pure ashes; one of 47 lbs. weight in twenty-five, another of 140 lbs. weight in fifty minutes. There was no trace of odour. The Siemens' furnace produced a still more rapid reduction. A body of 227 lbs. weight placed in a smooth, almost polished cylinder, heated to upwards of 1100° centigrade, was reduced to invisible gases and 5 lbs. of ashes in fifty-five minutes. Sir Henry had his plan before him, and shows incidentally that cremation, instead of adding to, might diminish by something like a million sterling the annual loss by earth-burial in London alone. It is not necessary to verify his calculations. There is certainly economy in time and land; but the Romans showed how costly cremation might be made. Nero, it was said, spent as much incense on the funeral of Poppæa as Arabia produced in a year.‡ The ultimate result in the cemetery and the crematory is the same: the body is converted into what may be assumed to be the same elements; in the one case by slow decay and filtration through air, earth, and water in 5, 10, or 100 years; in the other in 60 minutes through flame. Religious rites are provided for in the outlines Sir Henry Thompson sketches. But the outlines have to be filled up by the skilful to satisfy the mind. What the plan presumes is, that the body is taken to the Hall of Cremation; that after religious services, either at the house or the church, or the chapel, or the Hall itself, the light car bears it gently away from sight by silent mechanism, in costumes suitable to the child, the woman, the man, and to the taste

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* Contemporary Review, 1874, for January, February, March.

† Tacitus, Germania, 27. Sir Thomas Brown's Hydrotaphia—Urn Burial—in his works.

‡ Pliny, 12; 41.

of the time and the country. In the Italian manner — the best — the maiden's body in white robes, and strewed with fresh flowers, passes off under a veil, or through a cloud of incense amidst music — not into the grave—not to the vault, "to whose foul mouth no healthsome air breathes in," but through the flames—direct into the Heavens. Two adjuncts to the Hall of Cremation would be of striking advantage. Where it was desired, the body, on its way from the last view of friends, might be passed into a chamber to skilful experts, who could ascertain whether life might by any means be resuscitated; and then, at the wish of the friends, the parts might be inspected without danger to the medical attendant, and with every microscopical and chemical appliance handy. The body could here also, at the instance of a magistrate, be examined by a practised medical jurist. With a preliminary visit to the body, and an official certificate from the appointed medical health officer where no certificate had been given by a medical attendant, secret poisoning would become much more difficult and rarer than it is now with the power of disinterring the dead.

Mr. Holland, Medical Inspector of Burials, who has had great official experience in graveyards, combats Sir Henry Thompson's doctrines in an able article,* and elicits a keen reply. Mr. Holland reminds his readers that cemeteries exist; and contends that the "real danger from a *well-*" *situated* and *well-managed* cemetery, large in proportion to the number " of its burials, is not greater than from a well-managed railway." Burial of the dead has more powerful advocates than Mr. Holland;— Centuries of European usage, Custom, and Fashion. In Greece and Rome, slaves and the mass of the people were buried, the bulk of them in pits. Cremation was reserved for the great even among the Germans.† In India, cremation is not the prevailing practice.‡

The English churchyard in the country seems a natural resting-place for the population of all ranks; and in past ages, when interments were rare and graves were not reopened, could have had no sensibly bad effect on health. Green hillocks covered the remains of the labourer and the artisan, marble monuments the rich; the young, the beautiful, the old lay buried in one common earth. That pilgrims should wend to the tombs of Shakespeare in Stratford-on-Avon, Bacon in St. Albans, Byron in Hucknall, Burns in Dumfries, Wordsworth in Grasmere, is as natural as that they should visit the monuments of kings in Westminster Abbey, and of warriors in St. Paul's. Gray threw a halo of poetry over the English churchyard. But on visiting churchyards now in populous villages their charm is found to be fast vanishing; the graves are thick, are often reopened; the stones are ugly and sinking. Nothing can look more sad and desolate in the rain than these dank plots. In such churchyards no Dissenter could desire to rest.

Mr. Walker, Mr. Chadwick, and a Royal Commission, recently drew terrible pictures of the vaults and churchyards of London. The consecrated earth had lost its sanctity in putrid odours. Burial was forbidden in churchyards as a rule; and some of them are now sweet flower-gardens. Cemeteries surround London. Yet even there they are no longer safe, and are every year assuming alarming proportions; they not only pollute the waters, but exhale noxious vapours from the graves.

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* Contemporary Review, February 1874.

† Germania, 27. Funerum nulla ambitio: id solum observatur, ut corpora *clarorum virorum* certis lignis crementur. Struem rogi nec vestibus nec odoribus cumulant: sua cuique arma, quorundam igni et equus adjicitur. Sepulcrum cespes erigit.

‡ In the city of Bombay, 11,591 bodies were buried, 4,143 burnt, and 980 were exposed to the birds in the year 1871.—Report on Sanitary Improvements in India, 1873, page 200.

Mr. Seymour Haden, in three able letters to the *Times*,* has enumerated the defects of the present system of inhumation, and has suggested many manifest improvements, some of which, when the question is understood, will probably be adopted. The body is now kept in the house until putrefaction begins, accelerated by the influence of restless ferments and insects in the air; it is then "screwed up" in a coffin, where its corruption goes on for an indefinite time; and the coffin is buried sometimes in wet clay and sometimes over other coffins in graves opened at intervals under the faces of mourners, standing bare-headed both in the chill colds of winter and in the heats of summer. Thus, if the fatal disease is infectious, the source of infection is retained where it can do harm; in the Irish wake this is especially seen; the mourning coaches are mayhap infected indirectly; the gathering round the grave or vault is perilous in one way to the young, in another to the old; and the products of disease, or the decaying substances of the tissues of the body, find their way, in the end, into the wells, the sewers, the air of populous cities. Passing through loose earth the organic molecules are generally oxidised, but not always. It is not certain that the germs of disease are easily destructible by the re-agents of the earth; but in the ordinary course of things the whole of the body is gradually transmuted. Some of the corporal elements remain as mould, some are dissolved in water, and the rest, by a roundabout way, lose themselves in the atmosphere.

Mr. Haden describes what he saw in 1868 in the burial ground of St. Andrew, Holborn, before its contents had been removed to Ilford to make way for the new viaduct. The bodies buried in the plague-pit, without coffins, had disappeared; those in broken coffins were reduced to "a little ordinary earth, corresponding chiefly to the extraneous matters "which had accompanied the interment, and occasionally, not always, a few "bones. Nothing more. The body itself had disappeared."† It is not necessary to pursue his description of the ghastly contents, either of intact coffins, lead or wood, in the earth, or in graves lined with brick. The fact to note is, that in contact with the earth the body disappears, Mr. Haden says, in five or at most six years, the time varying necessarily in clay, chalk, and sand. Not to imprison the human elements in "cold obstruction," he suggests the use of a coffin (which he reminds us is from the Greek *κόφινος*, properly translated a twig-basket, or pannier) "of some "light permeable material, such as wicker or lattice-work, open at the top, "and filled in with any fragrant herbaceous matters that happened to be "most readily obtainable. A layer of ferns or mosses for a bed, a bundle "of sweet herbs for a pillow, and as much as it would still contain after "the body had been gently laid in it of any aromatic or flowering plant for "a coverlet—such a covering, in short, as, while it protected the body from "the immediate pressure of the earth as effectually as the stoutest oak, "would yet not prevent its resolution." He simplifies the preparations for the funeral so as to occupy, soothe, not harass the family; and conveys the body to the cemetery by railway or river forty hours after death to rest ten years in undisturbed dissolution. The mode of burial is worked out in some detail. The number of bodies to be buried annually in Greater London is 90,000, and the number is increasing; so that looking at the state of the existing cemeteries and their exhalations, new cemeteries will be required. Mr. Haden in the lowlands of Essex and Kent sees good sites; "the broad and silent river" to be "our Appian way." If the

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* Published separately, by Macmillan, 1875.

† Earth to Earth; a plea for a change of system in our burial of the dead; by F. S. Haden, F.R.C.S. See also the works and papers of Mr. Walker, Dr. Waller Lewis, Mr. Chadwick, and a good summary of the researches of Orfila and other French writers in the Dictionary of Hygiene by Tardieu.

English people believed that the soul could not enter paradise until the body was interred they would wish, with Patroclus, for quick burial :

" Hasten my funeral rites, that I may pass
" Through Hades' gates." *

As that is not their belief they have fallen into the habit of retaining the body for various reasons; and this habit is an obstacle at the outset to the new system. It may in time be overcome, as it is already on the continent, in these islands; when friends see that by laying the lifeless corpse in a fresh grave a few hours after death, they often save it from putrefaction; porous earth, *eremacausis*—dry decay—usually converting it slowly into its elements. Against the dread of being buried alive—if buried early—the most timid will be fortified by the assurance of physicians and surgeons so eminent as Burrows, Fergusson, Gull, Jenner, Paget, and Watson, " that the signs of death are as certain after a few hours' suspension of " the vital functions as they can be after many days." It would, they add, be a matter of regret if " groundless fears * * * should hinder, for a " moment, the adoption of an improvement in our social system, the import- " ance of which cannot be overrated."†

Mr. Haden believes that a thousand acres of land will afford decorous burial to a hundred thousand bodies of all ages every year for ever on the plan he has sketched, the bodies being all dissolved in less time than ten years ‡ after interment in single graves on which the earth covered with fragrant herbs and flowering shrubs presses lightly. This involves necessarily the absence of tombstones over the body for any longer term than ten years, and it is not, therefore, in accordance with existing usage. The grave will not be the monument; which may be lodged in the cemetery or elsewhere; in the church, or in the sacred precincts of any parish, county, or metropolitan *Santa Croce*. This question of no small delicacy is discussed in its various bearings by Gœthe, in one of his philosophical romances,§ where a leading character places the grave-stones along the church, levels the hillocks, and sows the ground with fragrant clovers.

It is worthy of remark that when gravestones originated there was no national registration: and that in the present day, while portraits of great artistic merit can be commanded by the rich, and photography preserves the features of the poor as they lived, the name, age, place, and date of the death of every Englishman are recorded in registers, to be preserved in perpetuity.

Dr. Parkes, the author of the best work on Hygiene in any language, points out all the difficulties of burial in populous cities, and dwells on the dangers of overcharged churchyards and urban cemeteries. He admits the advantages of cremation, but suggests that maritime nations might find it at some time preferable to bury man in the ocean; to let the—

hammock-shroud
Drop in his wide and wandering grave.

This form of burial is already in use. The sea is the too frequent grave of our gallant seamen, of sailors in the merchant service, and of hapless emigrants.

Sir Henry Thompson and Mr. Haden contend that their several systems have great advantages on the side of economy as well as safety. Funerals now cost in the United Kingdom seven or eight millions a year, and while

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* Derby. " gloomy" is omitted before " gates " as it is not in the original :

Θαπτε με ὅττι τάχιστα, πύλας Ἀΐδαο περήσω.
Iliad, xxiii., 71.

† Earth to Earth, pp. 43–4.

‡ Some of the ancients professed to know a stone that consumed the body (" *exceptis dentibus* ") in forty days,—hence the name, sarcophagus (flesh-eater).—Pliny, Nat Hist., 36; 27. Orfila, an eminent chemist, conducted a series of researches on the decay of bodies in different kinds of earth. He sets down two or three years as an average term.

§ Elective Affinities.—Die Wahlverwandschaften. Part 2., cap. 1.

much may possibly be saved on either plan in ceremonial and in coffins, it is not likely that the expenditure on monumental art will be reduced in the present age by affluent families. It is, however, to be regretted that persons of narrow means are induced by custom to incur great expense even at a moment when the chief source of income is dried up. Goethe profoundly remarks, that portraits of the dead are their best memorials: and that *they* at times regard us almost reproachfully, as they remind us how much we failed to do for the absent and lost when present and living. Nations as well as families too often dishonour the living and glorify the dead: so anything that detaches from the grave and lifts them above it is laudable. The good men do is their eternal monument: and its survival their highest reward. Service to the living is true devotion to the dead. Diminution of the cost of funerals by new methods can but be a national gain.

To another kind of economy importance is attached by the advocates of cremation. The body, say they, is required; it cannot be spared for an indefinite time. Nature "destines the material elements of my body," an eloquent writer exclaims, "to enter the vegetable world on purpose to "supply another animal organism which takes my place. She wants me, "and I *must* go. * * * Shall her riches be hid in earth to corrupt, "and bear no present fruit; or be utilised without loss of time, value, and "interest, for the benefit of starving survivors?"

Now Nature is not quite in such need. The average weight of the body is set down by Sir Henry Thompson at 72 lbs., and taking the population of the world at 1200 millions, and the annual deaths at 40 millions, the yearly amount to be given up by cremation to the earth is 45,893 tons; to the air 1,239,821 tons; to the earth and air 1,285,714 tons.* But this last sum is but a very small fraction of the atmosphere, whose weight, reckoned at 15 lbs. on the square inch, is on a square mile at the sea level 26,882,743 tons: and the superficies of the earth being 196,862,256 square miles, it follows that the weight of the atmosphere is 5,292,197,434 *millions* of tons: of which 2,116,879 *millions* of tons consist of carbonic acid. The law of the diffusion of gases is such that every gas is diffused as if no other gas existed; the other gases only retarding the diffusion; so that carbonic acid given off pure from a funeral pyre at any point of the earth flies away in every direction; and equilibrium is so strictly preserved that at nearly every point the proportion carbonic acid bears to the oxygen and nitrogen in the atmosphere is the same, although living as well as dead animals and fires are discharging, and vegetables are absorbing it continually. The carbonic acid, ammonia, and aqueous vapor once thrown by cremation into the atmospheric ocean 50 miles deep, covering the 196,862,256 square miles of the earth's surface† has little chance of ever constituting again any integral part of any Englishman living in these islands. Nor would the mass of oxygen, nitrogen, hydrogen, or carbonic acid supplying the animal kingdom be sensibly reduced if the animals and men in the world were all, as in Egypt, embalmed for a thousand years. The economy of gases is of little weight. The scantier phosphates of bone and brain are retained by both the rival methods; but more organic matter is left in the ground by perfect inhumation than can ever be returned to it after perfect cremation. Inhumation saves up soil.

In comparing the two methods, their cost in ceremonial and monuments may be set down as equal; it may be either great or small; but the indispensable outlay in inhumation and cremation will differ to an extent that experience alone can determine. On the side of the Public Health cremation has the best of it: it destroys the germs of zymotic

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* Sir Henry Thompson makes the mean weight of the ashes 2·57 lbs., of the whole body, 72 lbs. Mr. W. Eassie, C.E., in his "Cremation of the Dead," p. 114, says the quantity of the ashes left from a body of average weight is accurately given by Sir Henry Thompson. The ashes of a lady, aged 26, weighed 3·75 lbs.

† Barlow, as deduced from Laplace.

diseases, of offence, and of corruption at once. It is especially suitable to the dead by epidemical diseases. The present abuses of a barbarous burial system must cease. But there is no reason why a well-devised inhumation and perfected cremation should not go on side by side; the one or the other being adopted so as to meet the exigency of each case, creed, place, and climate. Habits change slowly, and if trials are made experience will decide. Neither of the systems when once in use will excite in common minds more repugnance, than nature, desiring her creatures to love life, has thrown over the contemplation of dissolution. Some will prefer a house of rest in the earth; others a home in the sky. It is easily conceivable that a woman of refined mind might choose cremation to escape what she dreads of worms, mould, *eremacausis*, putrefaction, or any kind of profanation.

The question of interment is as the population increases becoming every day more urgent; it is not a mere question of sectarian grievance: it is a prime question of public health. Churchyards infect cities. Burial must be shorn of its dangers. It is vain to attempt to throw all the blame of existing abuses on undertakers. Their occupation is not attractive; it is unhealthy. They do very fairly what they are required to do by families who are swayed by fashion. Nor is it in England a matter of great reproach against the proprietors of cemeteries that they are "trading companies;" that is, companies which advance capital, and offer to perform certain services on certain terms. What would the state of London be without its fourteen cemeteries,* some of which are now full?

The day will probably soon come when the several municipalities and sanitary authorities may, after due inquiry, and on equitable terms, relieve the cemeteries and yards of their office; and lay down such wise regulations as may secure the decorous, safe inhumation, or cremation of the seven hundred thousand bodies that fall victims to death annually in the United Kingdom.

Health Insurance.—Sickness is not easily defined. It varies very much in degree; but for practical purposes the line is drawn by Friendly Societies, police, army, navy, and by patients in civil life with sufficient accuracy. Such sickness as confines a member to bed, called *bedfast* sickness, or at home from work, a policeman from duty, a soldier or sailor to hospital, figures as sickness in the respective returns. Enthetic disease is not recognised by the Friendly Societies or the police; but it swells the sickness of the army and navy returns. In civil life men work and take physic when their ailments are slight, whereas in the public service they are sent to hospital. Women oftener return themselves sick than men. The sickness of very young and very old people has not been accurately determined.

But it has been found by experience that in England to *one annual death* in a body of men *two* are on an average constantly suffering from sickness of some severity. There are *two years* of severe sickness on an average to *one death*. In the police and in some Friendly Societies the constantly sick to one annual death are 2·8; in the army (1873) at home 4·2; enthetic disease will account for the difference.

As there are now 700,000 annual deaths in the United Kingdom it may be inferred that there are 1,400,000 constant sufferers from severe sickness; and 2,000,000 sufferers from such sickness as requires medical relief, or throws the members of Friendly Societies on their funds. That would give 100 patients each to 14,000 hospitals and 6,000 dispensaries. The sickness is of every shade from the darkest mortal ailments to the lighter pains and muscular weaknesses, and is so related to the mortality that the deaths and sickness within certain limits rise and fall together; thus, if the constantly

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* There are also twenty-one grounds under Burial Boards; twelve with eight of the cemeteries are within, nine with six cemeteries are outside Registration London; and in London itself a few churchyards are still in use.

sick in the population could be reduced from 1,400,000 to 1,050,000, the deaths could be reduced from 700,000 to 525,000; or the annual mortality would be reduced to the desired rate of 17 in 1000. The diminution of human suffering keeps pace with the diminution of the death-rate; so do the ineffectives of the working population and the claims on the funds of Friendly Societies.

Sickness occurs irregularly through a man's life in attacks as they are called; still under such a law that there is an *average amount* of sick-time to every death; men are also subject to an average number of attacks during their lifetime under the same sanitary conditions; the liability of adults to attacks of one kind or other being the same at different ages, but the fatality and the duration of the illnesses from those attacks rising with the advance of age according to the same laws.*

It is evident that these Societies are most useful adjuncts in sustaining health; when the head of the family is disabled they supply him with medical attendance and a sum sufficient to meet his most urgent wants. And as there is a law of average sickness while every man's life or health is uncertain, they are indeed *Friendly Societies*, and with good management and proper Tables will confer all the benefits they promise. The ordinary premiums are often inadequate to provide sick-pay—that is really annuities—after the age of 65†; and the societies do not profess to support the members through chronic diseases of more than 12 or 18 months duration. Here the aid of the fortunate steps in to help the artisan and labourer in misfortune. Under the English Poor Law the sick man in need is provided with medical relief and sustenance; every man's life is insured against death by starvation, provided that, if able, he is willing to work. The Societies may properly be strengthened by honorary members.

Unhappily no community can, in our present state, undertake to supply all its members with all they want; and if we express in money the price of drink, food, heat, physic, clothing, lodging, cleansing including sewerage required for the enjoyment of the longest mean lifetime (L) we shall have this equation, putting I for income:

$$\frac{\mathrm{I}}{d+f+h+p+c+l+s} = x\mathrm{L}$$

where x is a fraction approaching *unity* as the full cost of the commodities of life approaches the income. Galen justly remarks that there is one hygiene for those who can command all the necessaries of life, another for those whose means are limited. To decide on the comfort to be sacrificed with least loss by the poor is an important life problem for the hygienic student.

The deaths in England in the year 1871 were 514,879; implying 1,029,758 persons constantly sick from diseases of some severity; that is equal to a number sufficient to fill 10,298 hospitals, each containing 100 beds always occupied. And it may be assumed that the numbers are sustained by an annual influx of 12,357,096 patients, ill a month on an average, of whom 11,842,217 recover, 514,879 die.

46,556 persons died in the year in public institutions—in hospitals 13,706, lunatic asylums 4097, workhouses 28,753; and 468,323 died in their own homes or elsewhere. Whether the patient in hospital or home shall recover or die often depends upon the medical attendant.

Under the new and judicious Friendly Societies Act the sickness and mortality returns will no doubt be so organised as to throw much light on the health of different professions as well as on the finance of sickness insurance.‡

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* Statistics of British Empire, Vol. II., Article "Vital Statistics," pp. 570–96.
† *See* Appendix to Registrar General's 12th Report.
‡ Friendly Societies Act, 38th & 39th Vict. ch. 60., A.D. 1875.

MEDICINE.—Descartes in his great discourse on the method of scientific discovery refers to medicine in a passage from which this is an extract.

* * * "mais principalement aussi pour la conservation de la santé, laquelle est sans doute le premier bien et le fondement de tous les autres biens de cette vie; car même l'esprit dépend si fort du tempérament et de la disposition des organes du corps, que, s'il est possible de trouver quelque moyen qui rende communément les hommes plus sages et plus habiles qu'ils n'ont été jusques ici, je crois que c'est dans la MEDECINE qu'on doit le chercher. * * * Je m'assure qu'il n'y a personne, même de ceux qui en font profession, qui n'avoue que tout ce qu'on y sait n'est presque rien à comparaison de ce qui reste à y savoir."*

Medicine had great attractions for Bacon, Descartes, Locke, and the great thinkers of the seventeenth century. Its object is to save mankind from the chief evils of life, and to develop the highest faculties of human nature. Nothing stands between it and the truth. It is free to avail itself of the light of every new science; it is not fettered by authority or precedents; it deals with positive facts and laws deducible from facts. Descartes was therefore justified in expecting more good from medicine than from jurisprudence or even theology. And although it is true that medicine has made incalculable progress since Linacre translated Galen's Hygienic Treatise, Harvey discovered the circulation of the blood, Sydenham taught the analysis of disease, and Hunter extended the sphere of physiology over the whole kingdom of nature, it is as true now as when Descartes wrote that what is known in medicine is little in comparison with what remains to be known: and it may be added that what it has done is little in comparison with what it can yet do. In his view medicine comprehends a knowledge of the forces and actions of the bodies that environ us, to be employed as artisans employ their materials, to make men the masters of nature; so that as this knowledge and a knowledge of their causes are acquired medicine might exempt us from an infinity of diseases both of body and mind.

The important influence of medicine on the health of the community is evident from the fact that medical practitioners are consulted in all stages of millions of cases of sickness occurring annually; and that their art is specially devoted to the cure of disease. The public for the greater part consult them and pay them fees in illness, as they consult and pay lawyers in legal difficulties. The clergy are paid on a different plan. So are the physicians and surgeons of the army and navy; who have thus not only attended the sick, but have been consulted on the maintenance of health; and have hence had opportunities of studying professionally hygienic medicine. The salutary effects of such an organisation are seen in the works of Pringle, Jackson, Monro, Blane, Lind, and Parkes. The army and navy medical statistical reports, due to it, are of the first order of importance.

In the years 1829–1830 civil hygiene was at the lowest ebb in England. In the University of Paris, then one of the first medical schools in Europe, the course of hygiene by Andral was attended by more than a thousand students; the lectures in all branches of medicine being open and free to the students of the University, but not compulsory. Villermé, a conscientious and original inquirer, Guerry, and others, founded the Annales d'Hygiène. In England hygiene was not taught at a single school. But students to get diplomas were bound to attend other courses and to "walk the hospitals." Hygienic students received no recognition; and if they had, would never have obtained any remuneration for their services, as the public from time immemorial had been in the habit of only paying fees when they were suffering from disease or menaced by death. Apothecaries were paid for their drugs. No town had a medical

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* Discours de la Méthode. Sixième Partie.

Health officer. The City of London, generally so well provided with a staff of officers, had to be reminded of its deficiency in 1847 by the Registrar-General* before it appointed Mr. Simon.

The first eruption of Asiatic cholera in the years 1831–2 awoke the country to its hygienic deficiencies; 30,924 deaths by that disease in the principal towns were reported to the Board of Health, and were tabulated by Sir David Barry.† Inquiries by Royal Commissions and by Boards of Health were instituted; a staff of medical officers was appointed under the new Poor Law; the Registration Act passed in 1836, and since July 1st, 1837 the causes of death have been published annually, quarterly, or weekly by the Registrar General. The medical colleges and the medical profession gave invaluable aid in supplying medical certificates. Successive Boards of Health were called into existence. And under the recent Sanitary Acts a staff of medical Health officers is created in 1558 jurisdictions, either urban or rural; a certain number of them more or less under the control of the Local Government Board. The medical officer of the Board, Mr. Simon, and his colleagues have published a series of Reports which will bear comparison with those of any other country.

The Reports of the existing medical officers are of great practical value; and will become more valuable every day. What is wanted is a staff officer in every county or great city, with clerks to enable him to analyse and publish the results of weekly returns of sickness to be procured from every district; distinguishing as the army returns do,‡ the new cases, the recoveries, the deaths, reported weekly, and the remaining in the several hospitals, dispensaries, and workhouses: these compiled on a uniform plan when consolidated in the Metropolis would be of national concern. It has been suggested that the returns of sickness should, to save time, be sent to London and there analysed on a uniform system, as the causes of death are. That with the present postal arrangements is quite practicable.

The thing to aim at ultimately is a Return of the cases of sickness in the civil population as complete as is now procured from the army in England. It will be an invaluable contribution to therapeutics as well as to hygiene; for it will enable the therapeutist to determine the *duration* and the *fatality* of all forms of disease under the several existing systems of treatment in the various sanitary and social conditions of the people. Illusions will be dispelled; quackery as completely as astrology suppressed; a science of therapeutics created; suffering diminished; life shielded from many dangers. The national returns of cases, and of causes of death will be an arsenal which the genius of English Healers cannot fail to turn to account.

Therapeutics relies on the diagnosis of disease surgical or medical. And the returns of the causes of death show that diagnosis, though still imperfect, has within 35 years made remarkable progress not only among the foremost physicians and surgeons of the day, but among the body of medical practitioners all over the kingdom who give certificates. Typhus, enteric and relapsing fevers, as well as the diseases of internal organs are discriminated, and not masked under symptoms. There is still room for improvement; and hope of rapid progress; for discoveries in the art of healing disease, rapidly reach the extremities of the land through the medical journals, lectures and well written treatises.

If the county and municipal authorities pay such salaries as will command the services of the ablest men in the profession, the expenditure will be amply repaid by the results. For when there is a demand, hygiene will be taught as efficiently as surgery in the schools; and state medicine will be a branch of medical examination in the universities and colleges.

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* See 10th Report, pp. ix–xvii.

† Report on Mortality of Cholera to Registrar General, 1848–9.

‡ See Report on Army Medical Statistics by Lord Herbert, Sir Alexander Tulloch, and Dr. Farr. Parliamentary Paper, No. 366, 1861.

With the divisions now existing, it is natural to expect that state medicine—public hygiene—will be advantageously cultivated by men who devote their whole time to its practice.

But there is a private hygiene, a hygiene peculiar to every profession, and to every individual; a hygiene applicable to families, to children, to old men, to women, to men suffering from heart and other organic diseases; to patients attacked by zymotic or acute local diseases. And this hygiene falls entirely within the province of private practice. It is not the least useful part of medical art, and deserves distinct recognition.

It receives recognition in the case of princes. The "King's physician" is an old English institution; he discharged his duties for a salary, wine, and other emoluments.* The series of court physicians contains the names of some eminent men who successfully cultivated hygiene; among them Sir James Clark in recent times deserves especial mention. Ramazzini discusses the duties of the court physician in his elegant treatise—*De Principum valetudine tuenda.* He notes the importance of the health of princes; lays down the qualification and the duties of the physician; insists on his studying the effects of the meteorological elements; spares no admonition; tells the prince that good living and good health seldom go together; and shows how food and drinks, varying with the seasons, tested by experience, should be adapted to every idiosyncrasy. Successive chapters follow under such heads as: What princes should avoid; exercise, hunting, riding, indispensable to princes; moderation in pleasure enjoined; sleep and wakefulness regulated; the secretions watched; nothing is more pernicious to princes than anxiety, and violent passions in which medicine cannot avail much; literary work not recommended to princes; regimen of health in old age; obesity in a prince not only insalubrious but indecorous; gout, stone, and cœcal colic to be specially guarded against: the regimen of the prince in camp and in campaigns is the subject of the fourteenth and concluding chapter.

This brief summary is sufficient to show how extensive and useful the duties of a judicious and accomplished court physician might be; and how absurd it would have been to make his pay depend upon the prince's illness. But the same regimen that suits a prince suits a nobleman, suits a knight, suits a merchant, a lawyer, a literary man, who would derive much more benefit from a physician specially engaged as adviser of the family for an annual stipend than from a medical attendant merely resorted to in illness. Service would be greater, pay higher—easier. Consulting practice would remain as it is.

It is already the custom of the proprietors of mines and of other great works to engage medical men to attend their workpeople by the year. This practice is laudable and deserves extension. The Friendly Societies contract for medical attendance, the only fault being that the terms are too low to insure the utmost efficiency. In all such cases the medical attendant should be requested to advise his constituents against any bad habits prejudicial to health.

The people in this country probably get a better supply of medical attendance than the people of any other country. But it is still imperfect. Some die in illnesses without medical aid. And in parts of the country even medical certificates of the cause of death are not given in all cases because the deceased has been seen in his last sickness by no qualified medical practitioner. The Poor Law provides medical relief for paupers. But the classes above them trust to quacks; or do not call in aid for fear of medical bills at a time when the head of the family may be earning nothing; this difficulty would be best met by clubs, or by their paying their medical attendant a certain sum quarterly. In the army there is *one* surgeon to

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* History of the Medical Profession and its influence on Public Health in England. *Medical Annual*, 1839.

every 202 men ; in the general population *one* medical practitioner only to every 1276 men, women, and children living.*

Soldiers require more surgeons than civilians ; but the latter have evidently an insufficient medical staff. The addition of Health officers to its numbers is therefore on every ground desirable.

Hygiene as at present taught requires extension, which it can only obtain when its professors are entirely devoted to its practice and study. The new biology will open fresh fields of research and shed on them brighter lights.

The health of an existing generation may no doubt be raised to a high standard by a hygienic regimen, complete as Roger Bacon insists, from infancy.† But a higher hygiene goes further back guided by physiology : it seeks to influence the child unborn in its aquatic life by placing the mother in favourable conditions ; and not resting there, it extends its view to the life of both parents, and to the foundation itself of families—Marriage. Hygiene has something to say to that besides proscribing close consanguinity. Civilisation is to man what domestication is to the inferior animals ; and history and analogy justify us in believing that the highest race admits of development by some of the means that have been found efficacious in the lowest, and by others that scientific biology can invent. The hygienic problem is how to free the English people from hereditary disease ; hereditary consumption, cancer, syphilis, gout ; hereditary insanity, hereditary vagrancy, hereditary criminality : and to develop in the mass the athletic, intellectual, æsthetic, moral, and religious qualities which have already distinguished some of the breed. There is a Divine Image in the future to which the nation must aspire. The first step towards it is to improve the health of the present generation ; and improvement if as persistently pursued, as it is in the cultivation of inferior species,‡ will be felt by their children, and their children's children. A slight development for the better, in each generation implies progress in a geometrical progression ; which yields results in an indefinite time, that if suddenly manifested would appear miraculous.

The vast tabular work that follows, condensed from ten times the number of tables, of five times the size, has been carefully compiled by the Statistical Department. I have to thank Mr. F. J. Williams for his ever ready assistance. I beg to bring under your special notice the valuable work Mr. Lewis did in preparing the Tables, pp. clxxxvii–ccxii, for the press before he was made an inspector. Mr. Mundy has very carefully revised the figures in this letter, and calculated many of the Tables. Mr. G. Rendle, M.R.C.S., by his medical knowledge, and by his great accuracy, has rendered me valuable aid.

I have the honour to be,
Sir,
Your very obedient servant,
WILLIAM FARR.

To
The Registrar General.

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* The Army List of 1875 contains—exclusive of medical officers on half pay—the names of 1 director general, 11 surgeons general, 33 deputy surgeons general, 447 surgeons major, and 442 surgeons (including 3 apothecaries), in all 934 medical officers ; the strength of the army officers and men at home and abroad was 188,379 in 1873.

At the Census of 1871 the physicians and surgeons enumerated were 14,684, assistants and medical students over 20 years of age 3116, making in the aggregate 17,800 ; the population enumerated was 22,712,266. The proportion of medical men to population has declined since 1851, when it was 9·7 per 10,000 living, to 8·3 in 1861, and to 7·8 in 1871. In the Army the proportion of medical men is 49 to 10,000.

† See note on page v.

‡ For a philosophical review of all that has been done by the domestication of Animals and Plants, see Mr. Darwin's work on that subject—perhaps his greatest.

PRELIMINARY TABLES.

TABLE 1.—**Mean Population, 1861-71, and Deaths**

CAUSES OF DEATH.	ALL AGES.	AGES OF PERSONS.							
		Total under 1 Year.	1	2	3	4	Total under 5 Years.	5—	10—
Mean Population, 1861-71	21,389,245	640,306	568,516	575,071	556,306	545,830	2,886,029	2,525,296	2,264,70
TOTAL DEATHS	4,794,500	1,155,182	405,586	195,972	125,678	88,882	1,971,300	200,820	101,28
1. Small-pox	34786	8229	3598	2923	2373	1758	18881	3655	126
2. Measles	94099	17526	35490	18608	9626	5286	86536	6115	65
3. Scarlatina	207867	12973	29404	33971	31639	25475	133462	55095	1135
4. Diphtheria	39454	3720	5166	4615	4629	4020	22150	9925	308
5. Whooping-cough	112800	46454	34520	15709	7909	4084	108676	3842	184
6. Typhus	189285	5252	7619	8449	7716	6986	36022	23323	16063
7. Diarrhœa and Dysentery	207256	122026	33071	6647	2304	1244	165292	2195	706
8. Cholera	22945	3764	1593	883	619	573	7432	1848	834
9. Other Zymotic Dis.	110310	15340	14689	12077	9550	6424	58080	9145	3304
10. Cancer	82820	37	49	84	120	87	377	190	176
11. Scrofula and Tabes	93529	34201	19081	7054	3100	1995	65431	6169	4431
12. Phthisis	529425	10271	8416	4407	2633	2219	27946	11461	18655
13. Hydrocephalus	74152	27147	19905	8537	4872	3416	63877	7346	2017
14. Diseases of Brain	595747	222843	38309	16333	9425	6086	292996	14353	7395
15. Diseases of Heart, and Dropsy	288447	4699	2201	1496	1231	1164	10791	5591	6095
16. Diseases of Lungs	719601	175335	86570	32083	15741	9030	318759	13925	4740
17. Diseases of Stomach and Liver	209744	24565	4324	2366	1578	1383	34216	4987	3906
18. Diseases of Kidneys	63754	556	634	579	571	465	2805	1685	1234
19. Diseases of Generative Organs	12506	51	38	21	14	7	131	12	42
20. Diseases of Joints	17658	488	440	353	334	317	1932	1966	1961
21. Diseases of Skin	12832	3990	760	326	162	137	5375	277	298
22. Childbirth & Metria	35254	—	—	—	—	—	—	—	3
23. Suicide	14009	—	—	—	—	—	—	1	84
24. Other Violent Deaths	149831	15929	6959	6127	4998	3996	38009	11557	10061
25. Other Causes	876389	399786	52750	12324	4534	2780	472124	6157	2740

NOTE.—This Table is formed from the facts relating to Males and Females separately, in the 10 years 1861-70, *see* pages 2-3 for the 25 years 1848-72 in Tables 33-34, where als

TABLE 2.—**Average Annual Number** of **Deaths** of **Males** by **different Causes** at **certain Ages,**

CAUSES OF DEATH.	MALES.—PROPORTIONAL NUMBER													
	ALL AGES.		0–5		5–10		10–15		15–20		20–25		25–35	
	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.
All Causes -	23,048	23,609	72,433	73,162	8,510	8,148	4,881	4,460	6,689	6,161	8,829	8,453	9,574	9,897
1. Small-pox - - -	242	182	1047	661	271	150	70	56	105	91	174	181	119	137
2. Measles - - - -	426	459	2847	3067	262	230	32	26	11	9	8	7	5	4
3. Scarlatina - - -	909	1011	4311	4745	1085	2218	461	468	146	149	67	80	39	47
4. Diphtheria - - -	106	177	431	757	228	338	85	107	39	58	21	35	11	24
5. Whooping-cough - -	460	487	3246	3394	133	123	6	5	1	1	1	·4	1	·3
6. Typhus - - - -	907	896	1401	1230	937	881	687	622	858	787	850	823	673	704
7. Diarrhœa and Dysentery -	1135	1032	5625	6100	233	84	111	33	113	83	180	49	241	72
8. Cholera - - - -		113		277		76		41		28		41		67
9. Other Zymotic Diseases -	924	500	3512	2124	463	378	179	142	204	157	207	132	324	162
10. Cancer - - - -	195	244	21	13	10	8	8	8	16	20	27	27	63	61
11. Scrofula and Tabes - -	451	481	2066	2429	312	278	250	218	228	191	212	168	160	128
12. Phthisis - - - -	2579	2467	1329	990	525	431	763	605	2397	2188	4055	3884	4034	4092
13. Hydrocephalus - -	464	412	2915	2578	396	326	105	93	31	20	12	8	7	5
14. Dis. of Brain - - -	2998	3072	12169	11390	607	597	361	335	397	371	440	442	638	704
15. Dis. of Heart, and Dropsy	1180	1311	426	399	240	233	241	252	322	312	347	345	514	603
16. Dis. of Lungs - - -	3322	3694	11296	12012	585	553	221	199	335	315	545	523	772	860
17. Dis. of Stomach and Liver	1007	993	1470	1374	238	205	219	192	268	238	326	280	464	449
18. Dis. of Kidneys - -	317	420	66	117	47	85	47	65	77	100	105	137	174	238
19. Dis. of Generative Organs	4	6	5	5	1	1	1	1	·3	1	2	2	2	3
20. Dis. of Joints - - -	78	95	56	72	71	95	93	102	91	102	80	89	61	70
21. Dis. of Skin - - -	52	64	164	199	12	13	10	15	13	17	14	19	14	19
22. Childbirth and Metria -	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23. Suicide - - - -	1101	99	-	-	-	-	769	4	863	28	949	59	999	93
24. Other Violent Deaths -		1076	1451	1476	643	600		753		830		957		991
25. Other Causes - - -	4191	4253	16379	17753	291	245	162	118	174	115	207	165	259	302

TABLE 3.—**Average Annual Number** of **Deaths** of **Females** by **different Causes** at **certain Ages,** t

CAUSES OF DEATH.	FEMALES.—PROPORTIONAL NUMBERS													
	ALL AGES.		0–5		5–10		10–15		15–20		20–25		25–35	
	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.
All Causes -	21,323	21,282	62,744	63,430	8,418	7,756	5,056	4,484	7,385	6,622	8,530	7,958	9,925	9,685
1. Small-pox - - -	202	145	1021	648	243	140	76	56	81	80	91	95	68	70
2. Measles - - - -	398	422	2749	2929	288	254	44	32	15	13	10	10	8	9
3. Scarlatina - - -	845	934	4071	4503	1998	2145	528	534	154	157	79	105	48	73
4. Diphtheria - - -	112	191	430	778	280	448	124	166	44	61	19	41	15	28
5. Whooping-cough - -	545	566	4003	4139	215	182	14	11	2	3	·4	1	1	1
6. Typhus - - - -	909	875	1434	1266	1077	966	878	798	1026	911	781	722	627	641
7. Diarrhœa and Dysentery -	1027	909	4899	5358	224	90	101	29	109	34	171	59	271	97
8. Cholera - - - -		101		237		71		33		26		41		73
9. Other Zymotic Diseases -	745	473	3165	1901	453	346	179	150	170	136	172	116	204	124
10. Cancer - - - -	434	523	23	13	9	7	9	8	18	17	30	33	141	163
11. Scrofula and Tabes - -	366	396	1773	2105	253	211	214	173	189	171	132	129	120	106
12. Phthisis - - - -	2774	2483	1281	947	630	476	1292	1045	3515	3110	4289	3966	4575	4378
13. Hydrocephalus - -	334	285	2162	1847	331	256	98	85	30	22	8	8	6	4
14. Dis. of Brain - - -	2495	2513	9479	8910	558	540	356	318	408	391	434	406	532	520
15. Dis. of Heart, and Dropsy	1311	1385	336	349	215	200	272	287	352	341	390	390	603	631
16. Dis. of Lungs - - -	3733	3052	9499	10074	607	550	240	220	342	306	413	383	583	613
17. Dis. of Stomach and Liver	1002	964	1121	997	245	190	191	152	307	229	406	324	570	509
18. Dis. of Kidneys - -	116	182	38	78	24	48	30	44	43	63	69	102	103	137
19. Dis. of Generative Organs	104	109	7	4	·3	·3	2	3	13	17	46	46	93	99
20. Dis. of Joints - - -	58	70	53	62	53	61	62	71	61	75	39	52	44	51
21. Dis. of Skin - - -	47	56	157	174	9	9	8	11	8	9	8	18	12	24
22. Childbirth and Metria -	320	321	-	-	-	-	·1	·3	144	161	612	633	886	921
23. Suicide - - - -	383	34	1138	-	427	·1	164	3	156	50	125	51	127	35
24. Other Violent Deaths -		344		1157		315		131		117		87		101
25. Other Causes - - -	4063	3949	13885	14959	289	242	171	124	196	142	206	160	278	226

1,000,000 Males living of those Ages, in England in the Two Decenniads 1851-60 and 1861-70.

1,000,000 AT EACH AGE.

25–45		45–55		55–65		65–75		75–85		85 and upwards.		CAUSES
1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	
15,464	17,956	19,165	30,855	32,995	65,352	66,690	146,671	146,576	310,085	313,570	-	
99	53	68	34	46	27	28	19	29	30	36	1. S	
4	2	2	1	1	1	1	1	1	-	7	2.	
23	20	14	15	9	10	5	8	8	-	7	3. S	
20	9	22	11	30	14	33	20	33	30	29	4. I	
1	*3	*4	*4	1	1	1	-	-	-	-	5.	
736	779	904	1043	1150	1503	1469	1743	1500	1471	1374	6.	
105 / 99	492	128 / 144	838	495 / 120	2230	1451 / 240	4997	3536 / 250	7690	7047 / 174	7. I / 8.	
238	714	341	1084	613	1941	1176	3320	1933	4603	3676	9.	
393	422	539	991	1208	1504	1877	1734	2201	1889	2327	10.	
97	126	107	143	140	185	137	122	93	91	73	11.	
4165	3830	3809	3333	3297	2389	2024	977	608	540	342	12. I	
8	7	2	5	2	8	3	12	2	-	-	13. I	
1342	1988	2244	4007	4635	9891	10916	17048	19812	19765	22238	14. I	
1251	1886	2167	4120	4581	8734	9229	13460	12902	10617	11454	15. I	
1723	3002	3560	6816	7387	13416	15185	21058	25104	25606	34223	16. I	
911	1664	1700	3462	3038	4537	4935	5246	5357	4373	4691	17. I	
446	471	628	807	1379	2132	2897	4263	5040	4296	5709	18. I	
8	7	10	11	16	19	31	27	38	28	58	19. I	
76	59	90	113	150	161	262	142	210	91	153	20. I	
29	43	57	85	111	202	216	407	372	511	580	21. I	
-	-	-	-	-	-	-	-	-	-	-	22.	
108 / 1144	1389	362 / 1292	1613	375 / 1312	1810	337 / 1630	2248	236 / 2067	3270	301 / 8603	23. S / 24.	
578	899	949	2680	3471	14012	12533	70671	61751	225108	210479	25.	

1,000,000 Females living of those Ages, in England in the Two Decenniads 1851-

1,000,000 AT EACH AGE.

25–45		45–55		55–65		65–75		75–85		85 and upwards.		
1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	1851 to 1860.	1861 to 1870.	
12,834	15,198	15,555	27,007	27,773	58,656	58,797	134,338	134,427	289,558	295,642	-	
30	25	32	14	23	10	15	9	18	20	14	1.	
4	2	3	2	1	1	1	2	1	-	-	2.	
23	19	12	14	10	11	6	9	6	-	-	3.	
22	10	22	9	22	11	21	12	20	15	16	4. I	
*3	*4	*1	*4	*3	*3	1	2	-	-	-	5.	
707	647	785	829	930	1279	1172	1435	1241	1213	993	6.	
127 / 101	472	164 / 116	930	483 / 133	2137	1410 / 208	4075	3628 / 219	7394	6389 / 200	7. I / 8.	
341	481	339	693	479	1349	938	2093	1614	3685	2930	9.	
473	1278	1328	1833	2300	2331	2810	2538	2844	2239	2713	10.	
94	108	108	136	121	146	123	114	99	69	46	11. S	
3809	3199	2939	2263	2005	1685	1259	751	475	474	280	12. I	
3	5	2	3	2	7	2	8	1	-	-	13. I	
939	1691	1810	3810	4015	6895	8514	13083	17073	16439	19210	14. I	
1101	1761	2175	4428	4703	8016	9431	11353	12144	9317	9917	15. I	
1130	2142	2527	5027	5815	11014	13111	17618	22166	21790	28121	16. I	
599	1036	1389	2067	2979	4492	4712	4958	5539	3714	4081	17. I	
243	212	314	317	606	461	723	479	735	565	671	18. I	
197	229	203	310	341	315	364	248	287	138	187	19. I	
69	62	84	93	111	121	155	101	132	81	114	20. I	
31	31	47	75	94	191	193	319	330	404	402	21. I	
89	71	69	-	-	-	-	-	-	-	-	22.	
51 / 139	274	83 / 200	362	80 / 313	718	83 / 636	1854	72 / 1892	4064	50 / 4243	23. S / 24.	
388	777	671	2548	2903	14140	12139	70159	63343	217977	208749	25.	

TABLE 4.—England, 1851-60.—Number of Deaths from different Causes

CAUSES OF DEATH.	AGES OF MALES.							
	Total under 1 Year.	1	2	3	4	Total under 5 Years.	5—	10—
TOTAL DEATHS -	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
1. Small-pox - - - - -	9774	16094	24021	28779	31091	14449	31800	14354
2. Measles - - - - - -	13670	80408	88374	74200	59497	39307	30732	6539
3. Scarlatina - - - - -	11252	68667	156153	223376	247683	59511	233318	94426
4. Diphtheria - - - - -	1931	7042	12280	19186	24455	5948	26746	17411
5. Whooping-cough - - - -	33174	71544	63815	51639	38547	44813	15646	1316
6. Typhus - - - - - -	5761	22247	45029	63282	77093	19337	110104	140647
7. Diarrhœa and Dysentery - -	87046	75087	36702	22154	16776	72873	13955	10224
8. Cholera - - - - - -	3173	5310	7789	9893	11233	4790	13468	12431
9. Other Zymotic Diseases - -	39563	44369	72063	88244	83008	48489	54870	36584
10. Cancer - - - - - -	154	256	642	813	870	292	1131	1690
11. Scrofula and Tabes - - -	23373	42164	36495	27436	24579	28524	36684	51283
12. Phthisis - - - - -	12584	27414	27950	24857	28556	18345	61718	156399
13. Hydrocephalus - - - -	27704	67505	56885	47258	48861	40237	46516	21582
14. Diseases of Brain - - -	223389	89683	80184	71797	68693	168010	71370	74039
15. Diseases of Heart, and Dropsy -	4151	6130	8900	11289	14464	5875	28174	49460
16. Diseases of Lungs - - -	146561	207823	157688	124302	100355	155947	68759	45209
17. Diseases of Stomach and Liver -	23490	13491	15968	16377	20528	20291	30256	44865
18. Diseases of Kidneys - - -	377	883	1776	2880	3703	907	5497	9718
19. Diseases of Generative Organs -	79	74	46	18	—	68	63	142
20. Diseases of Joints - - -	316	826	1569	2138	3256	774	8283	19092
21. Diseases of Skin - - - -	2821	1686	1294	724	1193	2258	1459	2004
22. Childbirth and Metria - -	—	—	—	—	—	—	—	—
23. Suicide - - - - - -	—	—	—	—	—	—	—	972
24. Other Violent Deaths - - -	10888	19023	40149	51516	63176	20034	75546	156500
25. Other Causes - - - -	318769	132274	64228	37842	32383	228921	34401	33123

	AGES OF FEMALES.							
TOTAL DEATHS -	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
1. Small-pox - - - - -	11201	17119	24502	30004	31200	16277	28921	14993
2. Measles - - - - - -	14446	81365	90823	77266	60559	43810	34256	8746
3. Scarlatina - - - - -	11297	68308	150643	214963	240199	64888	237324	104395
4. Diphtheria - - - - -	1798	6615	12991	21789	28912	6858	33279	24532
5. Whooping-cough - - - -	45069	95140	92419	75962	59838	68805	25539	2797
6. Typhus - - - - - -	6015	23009	47511	69316	87756	22859	127997	173667
7. Diarrhœa and Dysentery - -	90411	79825	36880	19938	16408	73482	13934	10233
8. Cholera - - - - - -	3209	4734	6363	8585	9770	4597	12646	9777
9. Other Zymotic Diseases - -	43119	42016	69849	80598	81318	50449	53870	35320
10. Cancer - - - - - -	209	282	787	899	820	368	1095	1765
11. Scrofula and Tabes - - -	23866	40422	32692	23710	22772	28264	30080	42262
12. Phthisis - - - - -	13975	27707	29256	26513	32989	20419	73601	255533
13. Hydrocephalus - - - -	24132	51141	45348	42943	42511	34450	39280	19455
14. Diseases of Brain - - - -	208702	86266	77080	68981	65134	151070	66247	70502
15. Diseases of Heart, and Dropsy -	4481	5519	7334	8709	11635	5681	25528	53848
16. Diseases of Lungs - - -	137218	202307	162465	129641	101976	151398	72055	47557
17. Diseases of Stomach and Liver -	19810	13482	15883	17311	19688	17868	29146	38335
18. Diseases of Kidneys - - -	273	665	949	1604	1865	607	2845	6029
19. Diseases of Generative Organs -	59	198	185	106	25	104	32	397
20. Diseases of Joints - - -	448	827	1272	1939	2784	845	6237	12298
21. Diseases of Skin - - - -	3225	1851	1620	1287	920	2502	1127	1507
22. Childbirth and Metria - -	—	—	—	—	—	—	—	20
23. Suicide - - - - - -	—	—	—	—	—	—	—	575
24. Other Violent Deaths - - -	12109	15160	28123	38607	46116	18142	50692	31791
25. Other Causes - - - -	324028	130042	65025	39329	34605	221257	34269	33673

Causes of Death in Ten Years.

Sixteen Ages to 1,000,000 Deaths at the same Ages from **All Causes.**

3—	20—	25—	35—	45—	55—	65—	75—	85 and upwards.	CAUSES OF DEAT
AGES OF MALES.									
[illegible]	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	TOTAL DEATHS.
			5305	2924	1090	408	128	98	1. Small-pox.
			276	120	31	16	7	—	2. Measles.
			2417	1111	483	150	54	—	3. Scarlatina.
			925	490	365	220	135	98	4. Diphtheria.
			7	14	12	21	—	—	5. Whooping-cough.
			51960	45373	33801	23023	11884	4741	6. Typhus.
			11561	15177	20963	28582	30716	23694	7. Diarrhœa and Dysente
			14016	12225	9445	5556	2879	1106	8. Cholera.
			41525	39767	35145	29715	22632	14845	9. Other Zymotic Disease
			13978	23507	30172	23016	11823	5997	10. Cancer.
			9205	7009	4626	2854	834	295	11. Scrofula and Tabes.
			320869	213310	109018	36369	6059	1770	12. Phthisis.
			567	387	260	123	81	—	13. Hydrocephalus.
			94544	110803	132784	150484	116501	63906	14. Diseases of Brain.
			80312	103720	133837	133373	84603	34238	15. Diseases of Heart, and
			122128	172207	214414	203346	143777	82384	16. Diseases of Lungs.
			71272	92680	99277	74040	33768	14108	17. Diseases of Stomach an
			23369	28221	30370	37546	29076	13862	18. Diseases of Kidneys.
			313	406	347	284	182	123	19. Diseases of Generative
			4933	4415	3686	2322	969	295	20. Diseases of Joints.
			1805	2393	2768	3097	2778	1647	21. Diseases of Skin.
			—	—	—	—	—	—	22. Childbirth and Metria
			11823	13441	11030	4991	1715	516	23. Suicide.
			80476	62789	41257	22726	13613	10023	24. Other Violent Deaths.
			363209	49310	88859	214403	485207	726146	25. Other Causes.
AGES OF FEMALES.									
[illegible]			1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	TOTAL DEATHS.
			3071	1529	524	174	64	68	1. Small-pox.
			312	138	65	10	17	—	2. Measles.
			2570	1220	537	185	64	—	3. Scarlatina.
			980	668	354	190	87	51	4. Diphtheria.
			36	24	13	5	12	—	5. Whooping-cough.
			49128	42000	32965	21814	10685	4395	6. Typhus.
			15175	17720	24171	30708	31860	24257	7. Diarrhœa and Dysente
			15466	13392	10115	6012	2931	1277	8. Cholera.
			22923	25040	25200	25411	19820	12726	9. Other Zymotic Disease
			48737	84107	68307	40095	17519	7902	10. Cancer.
			6764	7132	5035	2496	850	228	11. Scrofula and Tabes.
			343756	205261	88251	27867	6014	1635	12. Phthisis.
			370	317	203	118	58	—	13. Hydrocephalus.
			71775	110637	141359	151818	111852	56944	14. Diseases of Brain.
			91010	135928	168784	152003	83385	32280	15. Diseases of Heart, and
			98320	133694	186130	187709	131371	75275	16. Diseases of Lungs.
			77170	105780	109862	79092	36904	12827	17. Diseases of Stomach an
			12460	13979	11738	8262	3496	1261	18. Diseases of Kidneys.
			17158	19105	11470	5377	1902	546	19. Diseases of Generative
			4616	4647	4089	3424	2055	752	20. Diseases of Joints.
			1254	1786	2021	2769	3255	2376	21. Diseases of Skin.
			71799	96982	74460	4659	—	—	22. Childbirth and Metria
			3618	3553	4066	5597	3136	1481	23. Suicide.
			11043	9283	10434	12563	10992	10763	24. Other Violent Deaths.
			20815	29971	36437	51033	94327	241060	25. Other Causes.

TABLE 5.—England, 1861-70.—Number of Deaths from different Causes at

CAUSES OF DEATH.	AGES OF MALES.							
	Total under 1 Year.	1	2	3	4	Total under 5 Years.	5—	10—
TOTAL DEATHS - -	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
1. Small-pox - - - - -	6706	8335	14633	18690	19909	9031	18390	12642
2. Measles - - - - -	14822	87870	94011	74827	57064	41925	28232	5839
3. Scarlatina - - - - -	10993	73407	174867	257220	289622	64861	272230	105006
4. Diphtheria - - - - -	3301	12614	22282	35210	40244	10350	41478	23966
5. Whooping-cough - - - -	34885	73139	66671	50535	36634	46389	15045	1199
6. Typhus - - - - - -	4484	18110	41698	60183	72977	16816	108096	139470
7. Diarrhœa and Dysentery - -	103218	79621	33866	18626	14685	83379	10318	7412
8. Cholera - - - - - -	3220	3997	4976	5215	6479	3702	9288	9083
9. Other Zymotic Diseases - -	13058	37695	63184	78043	74816	29023	46428	31889
10. Cancer - - - - - -	28	105	449	941	964	176	902	1789
11. Scrofula and Tabes - - -	20312	47734	37292	25387	23272	33203	34136	48797
12. Phthisis - - - - -	8548	20547	22404	20189	23586	13527	52925	135695
13. Hydrocephalus - - - -	25215	56015	48918	42721	41970	35240	40029	20761
14. Diseases of Brain - - -	199142	97076	84894	75523	71430	155677	73299	75102
15. Diseases of Heart, and Dropsy -	3948	5386	8240	10349	14349	5448	28641	56484
16. Diseases of Lungs - - -	156212	215813	163110	122598	98312	164188	67834	44648
17. Diseases of Stomach and Liver -	23028	10867	13267	12550	15313	18775	25208	43006
18. Diseases of Kidneys - - -	524	1685	3579	5581	6614	1393	10455	14549
19. Diseases of Generative Organs -	59	57	82	112	112	66	58	157
20. Diseases of Joints - - -	415	1130	1978	2934	3610	985	11593	22865
21. Diseases of Skin - - - -	3405	1867	1499	1196	1569	2716	1537	3421
22. Childbirth and Metria - -	—	—	—	—	—	—	—	—
23. Suicide - - - - - -	—	—	—	—	—	—	—	924
24. Other Violent Deaths - - -	12990	18771	36609	47585	55804	20178	73669	168842
25. Other Causes - - - -	342485	128159	61491	34285	30065	242657	30119	26384

	AGES OF FEMALES.							
TOTAL DEATHS - -	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
1. Small-pox - - - - -	7646	9441	15198	19073	19648	10211	18091	12396
2. Measles - - - - -	15611	87114	95895	78848	61293	46182	82777	7100
3. Scarlatina - - - - -	11529	71531	171823	246296	283588	70992	276575	119179
4. Diphtheria - - - - -	3119	12868	24819	38447	50250	12262	57753	36030
5. Whooping-cough - - - -	46913	97826	93669	75275	55331	65248	23420	2140
6. Typhus - - - - - -	4625	19502	44531	62602	84261	19960	124578	177886
7. Diarrhœa and Dysentery - -	108671	83575	33970	18041	13302	84304	11572	6525
8. Cholera - - - - - -	3306	3854	4034	4637	6414	3744	9113	7378
9. Other Zymotic Diseases - -	13557	34647	60066	73941	69717	29966	41604	33360
10. Cancer - - - - - -	37	137	409	960	994	209	898	1686
11. Scrofula and Tabes - - -	29977	46315	34695	23948	21613	33170	27134	38655
12. Phthisis - - - - - -	9323	20966	22572	21709	26356	14929	61422	233102
13. Hydrocephalus - - - -	21344	41709	38199	34827	34870	29120	32961	19060
14. Diseases of Brain - - - -	185069	91669	81790	74465	65404	140474	69555	70904
15. Diseases of Heart, and Dropsy -	4219	5470	7027	9243	11834	5504	27001	63903
16. Diseases of Lungs - - -	146210	210929	164316	127888	104903	158819	70922	48909
17. Diseases of Stomach and Liver -	19048	10442	10877	12562	15809	15716	21440	33994
18. Diseases of Kidneys - - -	428	1434	2329	3510	3839	1226	6223	9798
19. Diseases of Generative Organs -	26	132	133	111	45	67	61	674
20. Diseases of Joints - - -	432	1037	1624	2382	3323	974	7898	15827
21. Diseases of Skin - - - -	3515	1881	1828	1382	1513	2739	1214	2459
22. Childbirth and Metria - -	—	—	—	—	—	—	—	50
23. Suicide - - - - - -	—	—	—	—	—	—	10	734
24. Other Violent Deaths - - -	14794	15445	25012	31984	34034	18243	40635	29215
25. Other Causes - - - -	350901	132076	64284	37860	31369	235842	31226	27747

The Table may be read thus:—Of 1,000,000 deaths of males aged 25 and under 35, on an average of the Ten Years 1861-70, 13,75

Causes of Death in Ten Years.

SIXTEEN AGES to **1,000,000 Deaths** at the same AGES from **All Causes.**

AGES OF MALES.

15—	20—	25—	35—	45—	55—	65—	75—	85 and upwards.	CAUSES OF DEATH.
[illegible]	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	TOTAL DEATHS.
[illegible]	21386	13783	7296	3555	1449	573	199	116	1. Small-pox.
1525	849	399	301	104	45	9	6	23	2. Measles.
[illegible]	9414	4799	1697	808	231	77	54	23	3. Scarlatina.
[illegible]	4113	2464	1497	1137	916	487	223	93	4. Diphtheria.
173	53	27	56	23	20	14	—	—	5. Whooping-cough.
[illegible]	97335	71162	58887	47140	35113	22032	10292	4383	6. Typhus.
[illegible]	5849	7283	7821	10082	14933	21755	20170	22473	7. Diarrhœa and Dysentery.
[illegible]	4844	6742	7364	7526	5764	3603	1745	557	8. Cholera.
[illegible]	15655	16394	17708	17775	18585	17638	13181	8535	9. Other Zymotic Diseases.
[illegible]	3213	6140	15260	28129	36607	28142	15631	7421	10. Cancer.
[illegible]	19872	12908	7220	5569	4250	2352	638	232	11. Scrofula and Tabes.
[illegible]	459467	413520	309348	201416	99337	30344	4761	1090	12. Phthisis.
[illegible]	1005	521	257	110	70	50	12	—	13. Hydrocephalus.
[illegible]	52343	71087	99639	117110	141377	164170	133800	70966	14. Diseases of Brain.
[illegible]	40788	67168	91592	114002	138832	138389	88634	36527	15. Diseases of Heart, and Drop
[illegible]	61822	86859	127867	182625	229941	227696	171887	109140	16. Diseases of Lungs.
[illegible]	33137	45390	67641	89160	92674	74003	36547	14959	17. Diseases of Stomach and Liv
[illegible]	16164	24003	30119	34333	38760	43441	34386	18205	18. Diseases of Kidneys.
173	274	339	582	531	473	464	259	185	19. Diseases of Generative Orga
[illegible]	10471	7101	5654	5159	4552	3080	1433	487	20. Diseases of Joints.
[illegible]	2193	1909	2142	2984	3375	3544	2340	1378	21. Diseases of Skin.
—	—	—	—	—	—	—	—	—	22. Childbirth and Metria.
[illegible]	6972	9348	12129	13066	11377	5345	1745	649	23. Suicide.
[illegible]	113251	100146	84986	67431	45836	24875	14102	11689	24. Other Violent Deaths.
[illegible]	19332	30494	42938	49535	74883	187907	441755	690369	25. Other Causes.

AGES OF FEMALES.

[illegible]	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	TOTAL DEATHS.
[illegible]	11961	7235	4146	2028	904	263	120	48	1. Small-pox.
[illegible]	1231	929	474	180	50	22	10	—	2. Measles.
[illegible]	13248	7510	2729	787	353	107	42	—	3. Scarlatina.
[illegible]	5195	2925	1845	1391	788	356	151	64	4. Diphtheria.
[illegible]	112	56	26	7	11	9	—	—	5. Whooping-cough.
[illegible]	90762	66208	59638	50433	34518	19393	9257	3284	6. Typhus.
[illegible]	7407	10067	10540	11858	17380	23974	27064	23264	7. Diarrhœa and Dysentery.
[illegible]	5298	7441	8402	7480	5575	3446	1632	918	8. Cholera.
[illegible]	14553	12836	13354	15361	17248	16213	12003	7261	9. Other Zymotic Diseases.
[illegible]	4101	10853	55903	98871	82809	47783	21153	9563	10. Cancer.
[illegible]	16144	10800	8142	6926	4351	2093	735	161	11. Scrofula and Tabes.
[illegible]	493366	432089	324045	183215	74340	21080	3334	918	12. Phthisis.
[illegible]	1056	437	240	153	77	36	10	—	13. Hydrocephalus.
[illegible]	51017	56821	77294	116761	144350	158410	127004	67749	14. Diseases of Brain.
[illegible]	48954	63141	98992	139849	171453	160396	92570	32812	15. Diseases of Heart, and Drop
[illegible]	48171	63270	93930	149578	211540	222986	164894	99144	16. Diseases of Lungs.
[illegible]	40632	52304	75327	101540	107270	80134	41289	16502	17. Diseases of Stomach and Liv
[illegible]	12983	16192	20215	20299	18301	12290	5468	2367	18. Diseases of Kidneys.
[illegible]	5742	10216	16395	19031	12274	6198	2132	660	19. Diseases of Generative Orga
[illegible]	6550	5270	4965	5412	3987	2040	1131	403	20. Diseases of Joints.
[illegible]	2212	2457	2360	3043	3402	3291	2497	1417	21. Diseases of Skin.
[illegible]	79190	95104	73823	3850	—	—	—	—	22. Childbirth and Metria.
[illegible]	3940	3568	4373	5332	3115	1403	537	177	23. Suicide.
[illegible]	10974	10379	11541	12885	11342	10811	14074	14957	24. Other Violent Deaths.
[illegible]	20071	23593	31879	43140	74362	206461	472691	718331	25. Other Causes.

ven from small-pox. 71,162 from typhus, 413,520 from phthisis, 86,859 from diseases of the lungs, and so on for the other diseas

TABLE 6.—ENGLAND, 1851-70.—Mean Number of Deaths from different

This TABLE is deduced from Tables 4. and 5. by taking the means of

CAUSES OF DEATH.	AGES OF MALES.							
	Total under 1 Year.	1	2	3	4	Total under 5 Years.	5—	10—
TOTAL DEATHS	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
1. Small-pox	8241	12214	19327	23734	25500	11740	25095	13498
2. Measles	14246	84139	91193	74264	58581	40616	29482	6189
3. Scarlatina	11123	71037	165510	240298	268653	62186	252774	99716
4. Diphtheria	2616	9828	17281	27196	32349	8149	34112	20688
5. Whooping-cough	34029	72342	65243	51087	37591	45601	15345	1257
6. Typhus	5123	20179	43364	61733	75035	18076	109100	140059
7. Diarrhœa and Dysentery	95132	77354	35284	20390	15730	78126	12136	8818
8. Cholera	3196	4653	6382	7554	8856	4291	11378	10757
9. Other Zymotic Diseases	26311	41032	67624	83144	78912	38759	50399	34237
10. Cancer	91	180	545	877	917	234	1061	1734
11. Scrofula and Tabes	26342	44949	36894	26411	23925	30963	33410	50040
12. Phthisis	10566	23981	25177	22523	26071	15936	57322	146047
13. Hydrocephalus	26460	61760	52902	44090	45416	37739	43273	21172
14. Diseases of Brain	211265	93380	82539	73660	70062	161844	72335	74571
15. Diseases of Heart, and Dropsy	4050	5758	8570	10819	14406	5661	23408	52972
16. Diseases of Lungs	151386	211818	160899	123450	99334	160068	68296	44920
17. Diseases of Stomach and Liver	23259	12179	14617	14463	17920	19633	27732	43981
18. Diseases of Kidneys	451	1284	2677	4230	5158	1250	7976	12133
19. Diseases of Generative Organs	69	65	64	63	56	67	60	149
20. Diseases of Joints	365	978	1773	2536	3433	879	9940	20978
21. Diseases of Skin	3113	1776	1396	960	1381	2487	1498	2712
22. Childbirth and Metria	—	—	—	—	—	—	—	—
23. Suicide	—	—	—	—	—	—	—	948
24. Other Violent Deaths	11939	18897	38379	49551	59490	20106	74608	162671
25. Other Causes	330627	130217	62860	36063	31224	235789	32260	29744

	AGES OF FEMALES.							
TOTAL DEATHS	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
1. Small-pox	9428	13280	19850	24538	25424	13244	23461	13693
2. Measles	15029	84240	93359	78057	60926	44996	33517	7923
3. Scarlatina	11413	69920	161233	230630	261894	67940	256950	111787
4. Diphtheria	2458	9741	18905	30118	39581	9560	45519	30741
5. Whooping-cough	45991	96483	93044	75619	57585	64527	24479	2618
6. Typhus	5320	21255	40021	65959	86009	21410	126288	175777
7. Diarrhœa and Dysentery	99541	81700	35425	18989	14855	78938	12753	8379
8. Cholera	3257	4294	5198	6611	8092	4170	10879	8577
9. Other Zymotic Diseases	28338	38332	64958	77270	75517	40208	49257	34340
10. Cancer	123	209	598	934	907	288	996	1725
11. Scrofula and Tabes	26922	43369	33693	23829	22192	30722	28607	40459
12. Phthisis	11649	24337	25914	24111	29673	17674	67512	241318
13. Hydrocephalus	22738	46425	41774	38885	38691	31785	36121	19258
14. Diseases of Brain	196886	88968	79435	71723	65314	145772	67901	70703
15. Diseases of Heart, and Dropsy	4350	5494	7180	8976	11734	5592	26264	58873
16. Diseases of Lungs	141714	206618	163391	128765	103440	155109	71489	48253
17. Diseases of Stomach and Liver	19429	11962	13380	14936	17848	16792	26793	36175
18. Diseases of Kidneys	350	1049	1639	2557	2852	916	4535	7913
19. Diseases of Generative Organs	42	165	159	108	35	85	46	535
20. Diseases of Joints	440	932	1448	2160	3153	909	7067	14062
21. Diseases of Skin	3370	1866	1724	1334	1216	2620	1170	1983
22. Childbirth and Metria	—	—	—	—	—	—	—	39
23. Suicide	—	—	—	—	—	—	5	654
24. Other Violent Deaths	13452	15302	27017	35296	40075	18193	45664	30503
25. Other Causes	337765	134059	64655	38595	32987	228550	32747	30710

Causes of Death in Twenty Years.

Causes at Sixteen Ages to 1,000,000 Deaths at the same Ages from All Causes.
the several numbers for the Two Decenniads 1851-60 and 1861-70.

AGES OF MALES.

15—	20—	25—	35—	45—	55—	65—	75—	85 and upwards.	CAUSES OF DEATH
1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	TOTAL DEATHS.
[illegible]	20680	13130	6400	3239	1269	490	163	107	1. Small-pox.
1579	855	446	288	112	38	12	6	11	2. Measles.
[illegible]	8490	4436	2057	959	357	113	54	11	3. Scarlatina.
7619	3947	1805	1211	818	640	353	179	95	4. Diphtheria.
189	67	52	31	18	16	17	—	—	5. Whooping-cough.
[illegible]	96690	70714	55424	43257	34457	22978	11078	4563	6. Typhus.
8598	8157	9366	9691	12630	17948	25169	28443	28064	7. Diarrhœa and Dysentery
8638	7305	10231	10690	9876	7604	4579	2312	831	8. Cholera.
[illegible]	19583	25094	29616	28771	26865	23677	17907	11690	9. Other Zymotic Diseases.
2798	3138	6338	14619	25818	33389	25579	13727	6709	10. Cancer.
[illegible]	21942	14820	8212	6289	4488	2593	736	263	11. Scrofula and Tabes.
[illegible]	45848	417456	315109	207363	103978	33457	5710	1430	12. Phthisis.
3907	1193	630	412	248	165	86	46	—	13. Hydrocephalus.
[illegible]	51066	68871	97092	113957	137081	157327	125151	67386	14. Diseases of Brain.
[illegible]	40021	60444	85952	109906	136335	135884	86619	35383	15. Diseases of Heart, and D
[illegible]	61750	83729	124998	177416	222178	216521	157832	95862	16. Diseases of Lungs.
[illegible]	35019	46950	69457	90920	95476	74022	36158	14534	17. Diseases of Stomach and
[illegible]	14040	21095	26744	30277	34565	40494	31731	16034	18. Diseases of Kidneys.
112	260	254	447	469	410	374	220	154	19. Diseases of Generative O
[illegible]	9764	6711	5296	4787	4109	2776	1201	391	20. Diseases of Joints.
[illegible]	1897	1693	1973	2683	3071	3320	2659	1763	21. Diseases of Skin.
—	—	—	—	—	—	—	—	—	22. Childbirth and Metria.
4258	6735	9116	11976	13554	11203	5163	1730	582	23. Suicide.
[illegible]	107806	97815	82731	65110	43547	23801	13857	10859	24. Other Violent Deaths.
[illegible]	21635	28804	39574	49523	80861	201215	462481	708258	25. Other Causes.

AGES OF FEMALES.

1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	TOTAL DEATHS.
1196	11335	7042	3608	1778	714	218	92	58	1. Small-pox.
1851	1201	859	393	169	57	16	13	—	2. Measles.
[illegible]	11249	6165	2649	1003	445	146	53	—	3. Scarlatina.
[illegible]	3686	2214	1412	1023	561	273	119	57	4. Diphtheria.
304	81	61	31	15	12	7	6	—	5. Whooping-cough.
[illegible]	91135	64670	53893	46517	33692	20703	9971	3839	6. Typhus.
[illegible]	8774	11904	12857	14792	20775	27371	29467	23761	7. Diarrhœa and Dysentery
[illegible]	7534	10393	11934	10436	7845	4729	2281	1097	8. Cholera.
[illegible]	17334	16702	18139	20201	21269	21312	15913	9994	9. Other Zymotic Diseases.
[illegible]	3783	15509	52320	91489	75703	43937	19336	8683	10. Cancer.
[illegible]	15837	11512	8453	7029	4693	2294	792	199	11. Scrofula and Tabes.
[illegible]	500663	456557	333898	194238	81296	24474	4574	1276	12. Phthisis.
[illegible]	1018	538	305	235	140	77	34	—	13. Hydrocephalus.
[illegible]	50956	55218	74535	113699	142953	155114	119428	62207	14. Diseases of Brain.
[illegible]	47357	62960	95506	137839	170119	156200	89203	32546	15. Diseases of Heart, and D
[illegible]	48284	60970	90128	142636	198840	205393	148133	87210	16. Diseases of Lungs.
[illegible]	44117	54947	76349	103660	108566	80063	39097	14665	17. Diseases of Stomach and
[illegible]	10476	13587	16338	17135	15019	10276	4483	1814	18. Diseases of Kidneys.
[illegible]	5571	10032	16776	19368	11872	5787	2017	603	19. Diseases of Generative O
[illegible]	5549	4643	4806	4750	3705	2347	941	346	20. Diseases of Joints.
[illegible]	1583	1855	2173	2532	3085	3273	2436	1407	21. Diseases of Skin.
[illegible]	75645	92203	74183	4254	—	—	—	—	22. Childbirth and Metria.
[illegible]	3779	3560	4219	5420	3125	1442	456	182	23. Suicide.
[illegible]	11009	9907	10987	12695	11167	10787	13750	14403	24. Other Violent Deaths.
[illegible]	22145	25627	34158	47067	84345	223761	497405	735564	25. Other Causes.

TABLE 7.—**Table of Mortality,** derived from the ENGLISH LIFE TABLE, showing of what
The TABLE shows also, according to the English Life Table, the Annual Births being 1,000,000; the
Population of 40,858,184, enjoying

AGES	ALL AGES.	0— (*See* Table 10.)	5—	10—	15—	20—
DEATHS FROM ALL CAUSES	1,000,000	263,182	34,309	17,946	21,813	28,705
TOTAL ZYMOTIC DISEASES—Order 1.*	175,619	87,099	19,256	6,555	4,717	4,554
ZYMOTIC DISEASES—Order 1.*						
1. Small-pox	6,521	3,331	833	244	201	456
2. Measles	12,865	11,507	1,080	127	39	29
3. Scarlatina	30,021	17,959	8,743	1,901	493	283
4. Diphtheria	4,945	2,423	1,364	464	165	100
5. Whooping-cough	15,161	14,424	682	35	6	2
6. Typhus	38,107	5,401	4,036	2,842	2,907	2,606
7. Diarrhœa and Dysentery	34,366	20,344	427	154	141	244
8. Cholera	6,155	1,129	382	173	134	215
9. Other Zymotic Diseases—Order 1.*	27,478	10,579	1,709	615	541	529
FIVE CONSTITUTIONAL DISEASES.						
10. Cancer	21,311	71	33	31	58	100
11. Scrofula and Tabes	14,106	8,115	1,100	811	633	541
12. Phthisis	114,417	4,469	2,139	3,526	9,074	13,785
13. Hydrocephalus	11,252	9,296	1,363	362	84	32
LOCAL DISEASES.						
14. Diseases of the Brain	121,859	40,065	2,406	1,303	1,275	1,464
15. Diseases of the Heart, and Dropsy	76,660	1,507	938	1,005	1,080	1,255
16. Diseases of the Lungs	149,585	41,476	2,397	837	1,056	1,577
17. Diseases of the Stomach and Liver	52,497	4,778	936	717	844	1,137
18. Diseases of the Kidneys	14,910	301	215	179	234	351
19. Diseases of the Generative Organs	3,062	20	2	6	26	85
20. Diseases of the Joints	3,395	243	292	312	270	219
21. Diseases of the Skin	2,512	663	46	42	39	50
22. CHILDBIRTH AND METRIA	6,921	—	—	—	244	1,100
VIOLENT DEATHS.						
23. Suicide	3,479	—	—	14	94	150
24. Other Violent Deaths	30,052	5,175	2,069	1,703	1,580	1,677
25. OTHER CAUSES	198,363	59,904	1,115	543	505	628

The Table may be read vertically thus:—Under 5 years of age 263,182 may be expected to die; 3,331 of Small-pox, namely, 833 of Small-pox, 1,080 of Measles, 8,743 of Scarlatina, &c. The Table, read horizontally, shows at what Typhus; namely, 5,401 under 5 years of age, 4,036 at ages 5—10, 2,842 aged 10—15, 2,907 aged 15—20, 2,696 aged 20—25,

NOTE.—The term "Other Causes" includes the diseases under Class I., Orders 2, 3, and 4, namely, Syphilis, Stricture Worms; Class II., part of Order 1, namely, Gout, Cancrum Oris, and Mortification; Class IV., Order 1, parts of Old Age, Atrophy and Debility; Sudden Deaths and Deaths from Causes not specified are also included.

The numbering of the above heads of diseases will be found useful for comparison with Tables 33-34, where the

* Exclusive of Metria or Puerperal Fever, which in this Table and

Diseases and at what Ages 1,000,000 LIVEBORN CHILDREN may be expected to die.

Annual Deaths 1,000,000; the Deaths at the respective Ages and of the respective Causes out of a Mean Life-time of 40·858 years.

25—	35—	45—	55—	65—	75—	85 and upwards.	- - - AGES.
62,052	69,078	81,800	112,086	147,905	122,559	38,565	DEATHS FROM ALL CAUSES.
7,918	7,616	8,101	9,795	11,256	7,229	1,523	TOTAL ZYMOTIC DIS.—Order 1.
							ZYMOTIC DISEASES—Order 1.
621	347	210	113	53	16	3	1. Small-pox.
41	23	11	5	2	1	—	2. Measles.
339	162	80	45	19	6	—	3. Scarlatina.
125	91	74	68	47	19	3	4. Diphtheria.
4	2	2	2	2	—	—	5. Whooping-cough.
4,197	3,777	3,749	3,822	3,233	1,287	160	6. Typhus.
664	776	1,115	2,162	3,883	3,551	905	7. Diarrhœa and Dysentery.
640	781	829	865	688	281	38	8. Cholera.
1,288	1,657	2,031	2,713	3,529	2,068	414	9. Other Zymotic Diseases—Order 1.
							FIVE CONSTITUTIONAL DISEASES.
682	2,290	4,583	5,998	5,122	2,040	301	10. Cancer.
815	576	542	511	361	93	8	11. Scrofula and Tabes.
27,134	22,404	16,468	10,445	4,294	627	52	12. Phthisis.
36	24	20	18	12	5	—	13. Hydrocephalus.
							LOCAL DISEASES.
3,944	5,941	9,313	15,678	23,108	14,974	2,488	14. Diseases of the Brain.
3,829	6,261	10,041	17,081	21,579	10,781	1,303	15. Diseases of the Heart, & Dropsy.
4,479	7,452	13,203	23,659	31,213	18,726	3,510	16. Diseases of the Lungs.
3,165	5,032	7,917	11,400	11,389	4,619	563	17. Diseases of the Stomach & Liver.
1,672	1,425	1,982	2,832	3,785	2,154	310	18. Diseases of the Kidneys.
324	585	750	657	450	141	16	19. Diseases of the Generat. Organs.
357	349	390	438	379	131	15	20. Diseases of the Joints.
110	143	214	344	488	312	61	21. Diseases of the Skin.
2,901	2,516	160	—	—	—	—	22. CHILDBIRTH AND METRIA.
							VIOLENT DEATHS.
301	564	803	826	492	131	14	23. Suicide.
3,301	3,280	3,354	3,155	2,572	1,691	495	24. Other Violent Deaths.
1,891	2,550	3,959	9,249	31,405	58,905	27,906	25. OTHER CAUSES.

11,597 of Measles, 17,959 of Scarlatina, and so on. At 5 and und r 10 years of age, 34,309 may be expected to die; ages respectively the several sets of causes prove fatal to life: thus, 38,107 persons may be expected to die of 4,197 aged 25–35, and so on.

of Urethra, Hydrophobia, Glanders, Privation, Want of Breast-milk, Purpura and Scurvy, Alcoholism, Thrush, and Orders 2, 3, and 4, namely, Premature Birth, Cyanosis, Spina Bifida, other Malformations, Teething, Paramenia,

deaths in the 25 years 1848-72 are shown for Males and Females separately for the individual diseases.

in subsequent Tables is returned in conjunction with Childbirth.

TABLE 8.—**Table of Mortality,** derived from the ENGLISH LIFE TABLE, showing of what
The TABLE shows also, according to the English Life Table, the Annual Births being 511,745; the
Male Population

AGES	ALL AGES.	0— (*See* Table 11.)	5—	10—	15—	20—
DEATHS FROM ALL CAUSES	511,745	141,387	17,327	8,741	10,682	14,166
TOTAL ZYMOTIC DISEASES—Order 1.	89,192	44,294	9,354	2,930	2,318	2,339
ZYMOTIC DISEASES—Order 1.						
1. Small-pox	3,592	1,691	435	118	163	291
2. Measles	6,509	5,883	511	54	17	12
3. Scarlatina	15,157	9,258	4,390	872	245	120
4. Diphtheria	2,315	1,204	591	181	81	46
5. Whooping-cough	6,777	6,491	266	11	8	1
6. Typhus	19,115	2,673	1,891	1,224	1,368	1,371
7. Diarrhœa and Dysentery	17,554	10,889	210	77	70	116
8. Cholera	3,150	616	197	94	73	105
9. Other Zymotic Diseases—Order 1.	15,023	5,589	873	299	299	277
FIVE CONSTITUTIONAL DISEASES.						
10. Cancer	6,794	35	18	15	30	45
11. Scrofula and Tabes	7,602	4,370	614	438	347	311
12. Phthisis	56,856	2,284	998	1,377	3,811	6,507
13. Hydrocephalus	6,443	5,386	750	185	42	17
LOCAL DISEASES.						
14. Diseases of the Brain	64,762	22,580	1,253	652	639	723
15. Diseases of the Heart, and Dropsy	36,490	816	492	463	528	567
16. Diseases of the Lungs	80,578	22,587	1,183	393	541	875
17. Diseases of the Stomach and Liver	25,955	2,743	481	384	420	496
18. Diseases of the Kidneys	10,906	185	138	106	148	199
19. Diseases of the Generative Organs	130	10	1	1	1	4
20. Diseases of the Joints	1,912	129	172	183	161	138
21. Diseases of the Skin	1,306	348	26	24	25	27
22. CHILDBIRTH AND METRIA	—	—	—	—	—	—
VIOLENT DEATHS.						
23. Suicide	2,606	—	—	8	46	95
24. Other Violent Deaths	22,659	2,921	1,293	1,422	1,387	1,517
25. OTHER CAUSES	97,554	32,699	559	260	238	306

Diseases and at what Ages 511,745 Boys BORN ALIVE may be expected to die.

Annual Deaths 511,745 ; the Deaths at the respective Ages and of the respective Causes out of a of 20,426,138.

25—	35—	45—	55—	65—	75—	85 and upwards.	- - - AGES.
39,592	35,142	44,169	58,785	74,977	58,900	16,877	DEATHS FROM ALL CAUSES.
4,140	4,056	4,491	5,244	5,802	3,542	682	TOTAL ZYMOTIC DIS.—Order 1.
							ZYMOTIC DISEASES—Order 1.
402	225	143	75	37	10	2	1. Small-pox.
14	10	5	2	1	—	—	2. Measles.
126	72	42	21	8	3	—	3. Scarlatina.
35	43	36	38	27	11	2	4. Diphtheria.
2	1	1	1	1	—	—	5. Whooping-cough.
2,163	1,948	1,999	2,026	1,723	652	77	6. Typhus.
287	340	558	1,055	1,887	1,675	390	7. Diarrhœa and Dysentery.
313	376	436	447	343	136	14	8. Cholera.
708	1,041	1,271	1,579	1,775	1,055	197	9. Other Zymotic Dis.—Order 1.
							FIVE CONSTITUTIONAL DISEASES.
194	514	1,140	1,963	1,918	809	113	10. Cancer.
453	289	276	261	194	43	4	11. Scrofula and Tabes.
12,771	11,073	9,159	6,113	2,509	336	24	12. Phthisis.
19	14	11	10	6	3	—	13. Hydrocephalus.
							LOCAL DISEASES.
2,107	3,412	5,034	8,068	11,796	7,371	1,137	14. Diseases of the Brain.
1,949	3,020	4,854	8,014	10,188	5,102	597	15. Diseases of the Heart, & Dropsy.
2,561	4,393	7,886	13,061	16,234	9,296	1,618	16. Diseases of the Lungs.
1,496	2,441	4,916	5,613	5,550	2,130	245	17. Diseases of the Stomach & Liver.
645	940	1,337	2,062	3,036	1,869	271	18. Diseases of the Kidneys.
8	16	21	24	28	13	3	19. Diseases of the Generat. Organs.
286	186	211	241	208	71	7	20. Diseases of the Joints.
52	69	119	180	249	157	30	21. Diseases of the Skin.
—	—	—	—	—	—	—	22. CHILDBIRTH AND METRIA.
							VIOLENT DEATHS.
279	421	599	659	387	102	10	23. Suicide.
2,992	2,997	2,976	2,560	1,785	816	183	24. Other Violent Deaths.
831	1,391	2,187	4,758	15,067	27,240	11,953	25. OTHER CAUSES.

TABLE 9.—**Table of Mortality**, derived from the ENGLISH LIFE TABLE, showing of what
The TABLE shows also, according to the English Life Table, the Annual Births being 488,255; the
Female Population

AGES	ALL AGES.	0— (See Table 11.)	5—	10—	15—	20—
DEATHS FROM ALL CAUSES	488,255	121,795	16,982	9,205	11,131	14,539
TOTAL ZYMOTIC DISEASES—Order 1.	86,427	42,805	9,902	3,625	2,399	2,215
ZYMOTIC DISEASES—Order 1.						
1. Small-pox	2,929	1,640	398	126	128	165
2. Measles	6,356	5,624	569	73	22	17
3. Scarlatina	14,864	8,701	4,363	1 029	248	163
4. Diphtheria	2,630	1,221	773	283	84	54
5. Whooping-cough	8,384	7,933	416	24	4	1
6. Typhus	18,992	2,728	2,145	1,618	1,539	1,325
7. Diarrhœa and Dysentery	16,812	9,455	217	77	71	128
8. Cholera	3,005	513	185	79	61	110
9. Other Zymotic Diseases—Order 1.	12,455	4,990	836	316	242	252
FIVE CONSTITUTIONAL DISEASES.						
10. Cancer	14,517	36	17	16	28	55
11. Scrofula and Tabes	6,504	3,745	486	373	286	230
12. Phthisis	57,561	2,185	1,146	2,249	5,263	7,278
13. Hydrocephalus	4,809	3,910	613	177	42	15
LOCAL DISEASES.						
14. Diseases of the Brain	57,097	17,485	1,153	651	636	741
15. Diseases of the Heart, and Dropsy	40,170	691	446	542	552	688
16. Diseases of the Lungs	69,007	18,889	1,214	444	515	702
17. Diseases of the Stomach and Liver	26,542	2,035	455	333	424	641
18. Diseases of the Kidneys	4,004	116	77	73	86	152
19. Diseases of the Generative Organs	2,932	10	1	5	25	81
20. Diseases of the Joints	1,483	114	120	129	109	81
21. Diseases of the Skin	1,206	315	20	18	14	23
22. CHILDBIRTH AND METRIA	6,921	—	—	—	244	1,100
VIOLENT DEATHS.						
23. Suicide	873	—	—	6	48	55
24. Other Violent Deaths	7,393	2,254	776	281	193	160
25. OTHER CAUSES	100,809	27,205	556	283	267	323

Diseases and at what Ages 488,255 Girls BORN ALIVE may be expected to die.

Annual Deaths 488,255 ; the Deaths at the respective Ages and of the respective Causes out of a of 20,432,046.

25—	35—	45—	55—	65—	75—	85 and upwards.	. . . AGES.
31,469	33,936	37,631	53,301	72,928	63,659	21,688	DEATHS FROM ALL CAUSES.
3,778	3,560	3,610	4,551	5,454	3,687	841	TOTAL ZYMOTIC DIS.—Order 1.
							ZYMOTIC DISEASES—Order 1.
222	122	67	38	16	6	1	1. Small-pox.
27	13	6	3	1	1	—	2. Measles.
194	90	38	24	11	3	—	3. Scarlatina.
70	48	38	30	20	8	1	4. Diphtheria.
2	1	1	1	1	—	—	5. Whooping-cough.
2,634	1,839	1,750	1,796	1,510	635	83	6. Typhus.
377	436	557	1,107	1,996	1,876	515	7. Diarrhœa and Dysentery.
367	405	393	418	345	145	24	8. Cholera.
885	616	760	1,134	1,554	1,013	217	9. Other Zymotic Dis.—Order 1.
							FIVE CONSTITUTIONAL DISEASES.
498	1,776	3,443	4,035	3,204	1,231	188	10. Cancer.
362	287	264	250	167	50	4	11. Scrofula and Tabes.
14,263	11,331	7,309	4,333	1,785	291	28	12. Phthisis.
17	10	9	8	6	2	—	13. Hydrocephalus.
							LOCAL DISEASES.
1,737	2,539	4,279	7,620	11,312	7,603	1,351	14. Diseases of the Brain.
1,989	3,241	5,187	9,067	11,391	5,679	706	15. Diseases of the Heart, & Dropsy.
1,918	3,059	5,367	10,598	14,979	9,430	1,392	16. Diseases of the Lungs.
1,729	2,591	3,901	5,787	5,839	2,489	318	17. Diseases of the Stomach & Liver.
427	555	645	800	749	285	39	18. Diseases of the Kidneys.
316	569	729	633	422	128	13	19. Diseases of the Generat. Organs.
152	163	179	197	171	60	8	20. Diseases of the Joints.
88	74	95	164	239	155	31	21. Diseases of the Skin.
2,961	2,516	160	—	—	—	—	22. CHILDBIRTH AND METRIA.
							VIOLENT DEATHS.
113	143	204	167	105	29	4	23. Suicide.
309	373	478	595	787	875	312	24. Other Violent Deaths.
913	1,159	1,772	4,496	16,318	31,665	15,953	25. OTHER CAUSES.

TABLE 10.—Table showing out of 1,000,000 LIVEBORN CHILDREN what **Numbers die** of the different **Diseases** in the **first Five Years of Life.**

(This Table is a development of Column 2. of Table 7. It shows the deaths at *each year* of age under 5.)

CHILDREN OF BOTH SEXES.						
AGES - - - -	Total under 5 Years.	0—	1—	2—	3—	4—5
DEATHS FROM ALL CAUSES - -	263,182	149,493	53,680	28,238	18,456	13,315
TOTAL ZYMOTIC DISEASES—Order 1.	87,099	31,266	21,777	14,811	11,050	8,195
ZYMOTIC DISEASES—Order 1.						
1. Small-pox - - - - - - -	3,331	1,310	683	553	446	339
2. Measles - - - - - - - -	11,507	2,181	4,520	2,605	1,405	796
3. Scarlatina - - - - - - -	17,959	1,682	3,784	4,614	4,346	3,533
4. Diphtheria - - - - - - -	2,425	381	526	511	529	478
5. Whooping-cough - - - - -	14,424	5,874	4,515	2,232	1,170	633
6. Typhus - - - - - - - -	5,401	779	1,111	1,261	1,179	1,071
7. Diarrhœa and Dysentery - - -	20,344	14,511	4,266	999	364	204
8. Cholera - - - - - - - -	1,129	481	240	164	131	113
9. Other Zymotic Diseases—Order 1. -	10,579	4,067	2,132	1,872	1,480	1,028
FIVE CONSTITUTIONAL DISEASES.						
10. Cancer - - - - - - - -	71	16	10	16	17	12
11. Scrofula and Tabes - - - -	8,115	3,976	2,372	997	463	307
12. Phthisis - - - - - - -	4,469	1,650	1,297	721	430	371
13. Hydrocephalus - - - - -	9,296	3,710	2,915	1,338	773	560
LOCAL DISEASES.						
14. Diseases of the Brain - - - -	40,065	30,637	4,897	2,287	1,342	902
15. Diseases of the Heart, and Dropsy -	1,507	625	302	223	183	174
16. Diseases of the Lungs - - - -	41,476	21,995	11,234	4,571	2,327	1,349
17. Diseases of the Stomach and Liver -	4,778	3,225	648	396	271	238
18. Diseases of the Kidneys - - -	301	61	62	61	63	54
19. Diseases of the Generative Organs -	20	9	6	3	2	—
20. Diseases of the Joints - - - -	243	60	51	45	43	44
21. Diseases of the Skin - - - -	663	483	98	44	21	17
22. CHILDBIRTH AND METRIA - -	—	—	—	—	—	—
VIOLENT DEATHS.						
23. Suicide - - - - - - - -	—	—	—	—	—	—
24. Other Violent Deaths - - - -	5,175	1,884	920	925	782	664
25. OTHER CAUSES - - - - -	59,904	49,896	7,091	1,800	689	428

TABLE 11.—**Table** showing out of 511,745 MALE CHILDREN, and of 488,255 FEMALE the **Numbers** of **Male and Female Children** respectively who **die** of the **dif first Five Years of Life.**

(This Table is a development of Column 2. of Tables 8 and 9.)

SEX	MALES.						FE		
AGES	Total under 5 years.	0—	1—	2—	3—	4—5	Total under 5 years.	0—	1—
DEATHS FROM ALL CAUSES	141,387	83,719	27,521	14,215	9,213	6,719	121,795	65,774	26,1
TOTAL ZYMOTIC DISEASES—Order 1.	44,294	16,745	10,810	7,267	5,432	4,040	42,806	14,521	10,9
ZYMOTIC DISEASES—Order 1.									
1. Small-pox	1,691	696	336	275	219	171	1,640	620	3
2. Measles	5,983	1,193	2,316	1,296	684	394	5,624	988	2,2
3. Scarlatina	9,258	931	1,955	2,353	2,214	1,805	8,701	751	1,8
4. Diphtheria	1,204	219	271	246	251	217	1,221	162	2
5. Whooping-cough	6,491	2,849	1,991	927	471	253	7,933	3,025	2,5
6. Typhus	2,673	429	555	616	569	504	2,728	350	5
7. Diarrhœa & Dysentery	10,889	7,964	2,129	503	188	106	9,455	6,547	2,1
8. Cholera	616	267	128	91	70	60	513	214	1
9. Other Zymotic Dis.—Order 1.	5,589	2,203	1,129	961	766	530	4,990	1,864	1,0
FIVE CONSTITUTIONAL DISEASES.									
10. Cancer	35	8	5	8	8	6	36	8	
11. Scrofula and Tabes	4,370	[illegible]	1,237	524	243	161	3,745	1,771	1,1
12. Phthisis	2,284	884	660	358	207	175	2,185	768	6
13. Hydrocephalus	5,386	2,215	1,700	752	414	305	3,910	1,495	1,2
LOCAL DISEASES.									
14. Diseases of the Brain	22,580	17,687	2,570	1,173	679	471	17,485	12,950	2,3
15. Dis. of the Heart, and Dropsy	816	339	158	122	100	97	691	286	1
16. Diseases of the Lungs	22,587	12,674	5,829	2,280	1,137	667	18,889	9,321	6,4
17. Dis. of Stomach & Liver	2,743	1,947	335	208	133	120	2,035	1,278	3
18. Diseases of the Kidneys	185	38	35	38	39	35	116	23	
19. Dis. of Generat. Organs	10	6	2	1	1	—	10	3	
20. Diseases of the Joints	129	31	27	25	23	23	114	29	
21. Diseases of the Skin	348	261	49	20	9	9	315	222	
22. CHILDETH. & METRIA	—	—	—	—	—	—	—	—	—
VIOLENT DEATHS.									
23. Suicide	—	—	—	—	—	—	—	—	—
24. Other Violent Deaths	2,921	999	520	546	456	400	2,254	885	[illegible]
25. OTHER CAUSES	32,699	27,680	3,584	893	332	210	27,205	22,216	3,5

TABLE **12.—Table of Mortality,** derived from the ENGLISH LIFE TABLE, showing, out **AT AND AFTER**

The Table shows also, according to the English Life Table, the Annual Births being 1,000,000; 12 Ages of 25 Classes of Causes,

AGE x - - - -	0	5	10	15	20	25
DEATHS FROM ALL CAUSES at Age x and upwards - -	1,000,000	736,818	702,509	684,563	662,750	634,045
TOTAL ZYMOTIC DISEASES—Order 1.	175,619	88,520	69,264	62,709	57,992	53,438
ZYMOTIC DISEASES—Order 1.						
1. Small-pox - - - - - - -	6,521	3,190	2,357	2,113	1,822	1,366
2. Measles - - - - - - -	12,865	1,358	278	151	112	83
3. Scarlatina - - - - - - -	30,021	12,062	3,319	1,418	925	642
4. Diphtheria - - - - - - -	4,945	2,520	1,156	692	527	427
5. Whooping-cough - - - - -	15,161	737	55	20	14	12
6. Typhus - - - - - - - -	38,107	32,706	28,670	25,828	22,921	20,225
7. Diarrhœa and Dysentery - - -	34,366	14,022	13,595	13,441	13,300	13,056
8. Cholera - - - - - - - -	6,155	5,026	4,644	4,471	4,337	4,122
9. Other Zymotic Diseases—Order 1. -	27,478	16,899	15,190	14,575	14,034	13,505
FIVE CONSTITUTIONAL DISEASES.						
10. Cancer - - - - - - - -	21,311	21,240	21,205	21,174	21,116	21,016
11. Scrofula and Tabes - - - -	14,106	5,991	4,891	4,080	3,447	2,906
12. Phthisis - - - - - - - -	114,417	109,948	107,809	104,283	95,209	81,424
13. Hydrocephalus - - - - -	11,252	1,956	593	231	147	115
LOCAL DISEASES.						
14. Diseases of the Brain - - - -	121,859	81,794	79,388	78,085	76,810	75,346
15. Diseases of the Heart, and Dropsy -	76,660	75,153	74,215	73,210	72,130	70,875
16. Diseases of the Lungs - - - -	149,585	108,109	105,712	104,875	103,819	102,242
17. Diseases of the Stomach and Liver -	52,497	47,719	46,783	46,066	45,222	44,085
18. Diseases of the Kidneys - - -	14,910	14,609	14,394	14,215	13,981	13,630
19. Diseases of the Generative Organs -	3,062	3,042	3,040	3,034	3,008	2,923
20. Diseases of the Joints - - - -	3,395	3,152	2,860	2,548	2,278	2,059
21. Diseases of the Skin - - - -	2,512	1,849	1,803	1,761	1,722	1,672
22. CHILDBIRTH AND METRIA - -	6,921	6,921	6,921	6,921	6,677	5,577
VIOLENT DEATHS.						
23. Suicide - - - - - - - -	3,479	3,479	3,479	3,465	3,371	3,221
24. Other Violent Deaths - - - -	30,052	24,877	22,808	21,105	19,525	17,848
25. OTHER CAUSES - - - - -	198,363	138,459	137,344	136,801	136,296	135,668

The Table may be read vertically thus:—Of 1,000,000 Persons dying annually at all ages, 6,521 die of Small-pox, fever, 32,706 die at the age of 5 and above that age, 28,670

of 1,000,000 BORN ALIVE, the NUMBER OF **Persons** DYING of the **various Diseases** TWELVE AGES.

the Annual Deaths 1,000,000; the Numbers of Persons dying annually **at and after** each of out of a Population of 40,858,184.

35	45	55	65	75	85	AGE *x*.
371,998	502,915	421,115	309,029	161,124	38,565	DEATHS FROM ALL CAUSES **at Age** *x* **and upwards.**
46,520	37,904	29,863	20,008	8,752	1,523	TOTAL ZYMOTIC DISEASES—Order 1.
						ZYMOTIC DISEASES—Order 1.
743	395	185	72	19	3	1. Small-pox.
42	19	8	3	1	—	2. Measles.
313	150	70	25	6	—	3. Scarlatina.
393	211	137	69	22	3	4. Diphtheria.
8	6	4	2	—	—	5. Whooping-cough.
14,023	12,251	8,502	4,690	1,447	160	6. Typhus.
12,302	11,616	10,501	8,339	4,456	905	7. Diarrhœa and Dysentery.
3,461	2,701	1,872	1,007	319	38	8. Cholera.
13,213	10,555	8,524	5,811	2,462	414	9. Other Zymotic Diseases—Order 1.
						FIVE CONSTITUTIONAL DISEASES.
30,534	18,044	13,461	7,463	2,341	301	10. Cancer.
3,091	1,515	973	462	101	8	11. Scrofula and Tabes.
54,220	31,386	15,418	4,973	679	52	12. Phthisis.
79	55	35	17	5	—	13. Hydrocephalus.
						LOCAL DISEASES.
71,302	66,561	56,248	40,570	17,462	2,468	14. Diseases of the Brain.
97,946	90,785	80,744	53,663	12,084	1,303	15. Diseases of the Heart, and Dropsy.
97,703	90,311	77,108	53,449	22,236	3,510	16. Diseases of the Lungs.
49,220	35,888	27,971	16,571	5,182	563	17. Diseases of the Stomach and Liver.
12,563	11,063	9,081	6,249	2,464	310	18. Diseases of the Kidneys.
2,399	2,014	1,264	607	157	16	19. Diseases of the Generative Organs.
1,701	1,353	963	525	146	15	20. Diseases of the Joints.
1,562	1,419	1,205	861	373	61	21. Diseases of the Skin.
2,676	160	—	—	—	—	22. CHILDBIRTH AND METRIA.
						VIOLENT DEATHS.
2,380	2,266	1,463	637	145	14	23. Suicide.
14,547	11,267	7,913	4,758	2,186	495	24. Other Violent Deaths.
128,974	131,434	127,465	118,216	86,811	27,906	25. OTHER CAUSES.

12,968 of Measles, 30,021 of Scarlatina, &c. The Table, read horizontally, shows that of 38,107 Persons who die of at age 10 and upwards, 25,828 at age 15 and upwards, and so on.

TABLE 13.—**Table of Mortality**, derived from the ENGLISH LIFE TABLE, showing, **AT AND AFTER**

The TABLE shows also, according to the English Life Table, the Annual Births being 511,745; 12 Ages, of 25 Classes of Causes, out

AGE x	0	5	10	15	20	25
DEATHS FROM ALL CAUSES at Age x and upwards	511,745	370,358	353,031	344,290	333,608	319,442
TOTAL ZYMOTIC DISEASES—Order 1.	89,192	44,898	35,544	32,614	30,296	27,957
ZYMOTIC DISEASES—Order 1.						
1. Small-pox	3,592	1,901	1,406	1,348	1,185	894
2. Measles	6,509	626	115	61	44	32
3. Scarlatina	15,157	5,899	1,519	647	402	282
4. Diphtheria	2,315	1,111	520	339	258	212
5. Whooping-cough	6,777	286	20	9	7	6
6. Typhus	19,115	16,442	14,551	13,327	11,959	10,588
7. Diarrhœa and Dysentery	17,564	6,665	6,455	6,378	6,308	6,192
8. Cholera	3,150	2,534	2,337	2,243	2,170	2,065
9. Other Zymotic Diseases—Order 1.	15,023	9,434	8,561	8,262	7,963	7,686
FIVE CONSTITUTIONAL DISEASES.						
10. Cancer	6,794	6,759	6,741	6,726	6,696	6,651
11. Scrofula and Tabes	7,602	3,232	2,618	2,180	1,883	1,522
12. Phthisis	56,856	54,572	53,579	52,302	46,491	41,964
13. Hydrocephalus	6,443	1,057	307	122	80	63
LOCAL DISEASES.						
14. Diseases of the Brain	64,762	42,182	40,929	40,277	39,638	38,915
15. Diseases of the Heart, and Dropsy	36,490	35,674	35,182	34,719	34,191	33,624
16. Diseases of the Lungs	80,578	57,991	56,806	56,415	55,874	54,999
17. Diseases of the Stomach and Liver	25,955	23,212	22,731	22,347	21,927	21,431
18. Diseases of the Kidneys	10,906	10,721	10,583	10,477	10,329	10,130
19. Diseases of the Generative Organs	130	120	119	118	117	113
20. Diseases of the Joints	1,912	1,783	1,611	1,428	1,267	1,129
21. Diseases of the Skin	1,306	958	932	908	883	856
22. CHILDBIRTH AND METRIA	—	—	—	—	—	—
VIOLENT DEATHS.						
23. Suicide	2,606	2,606	2,606	2,598	2,552	2,457
24. Other Violent Deaths	23,659	19,738	18,445	17,023	15,636	14,119
25. OTHER CAUSES	97,554	64,855	64,296	64,036	63,798	63,492

out of 511,745 Boys born alive, the Numbers dying of the various Diseases Twelve Ages.

the Annual Deaths 511,745; the Numbers of Males dying annually at and after each of of a Male Population of 20,426,188.

35	45	55	65	75	85	- - - - AGE *x*.
328,820	253,706	169,539	150,754	75,777	16,877	Deaths from all Causes at Age *x* and upwards.
28,517	19,761	15,270	10,026	4,224	682	Total Zymotic Diseases—Order 1.
						Zymotic Diseases—Order 1.
493	267	124	49	12	2	1. Small-pox.
18	8	3	1	—	—	2. Measles.
146	74	32	11	3	—	3. Scarlatina.
157	114	78	40	13	2	4. Diphtheria.
4	3	2	1	—	—	5. Whooping-cough.
8,425	6,477	4,478	2,452	729	77	6. Typhus.
5,965	5,565	5,007	3,952	2,065	390	7. Diarrhœa and Dysentery.
1,752	1,376	940	493	150	14	8. Cholera.
6,918	5,877	4,606	3,027	1,252	197	9. Other Zymotic Diseases—Order 1.
						Five Constitutional Diseases.
6,457	5,943	4,803	2,849	922	113	10. Cancer.
1,069	780	502	241	47	4	11. Scrofula and Tabes.
29,513	18,140	8,961	2,869	360	24	12. Phthisis.
44	30	19	9	3	—	13. Hydrocephalus.
						Local Diseases.
36,986	33,396	26,362	20,304	8,508	1,137	14. Diseases of the Brain.
31,775	28,755	23,901	15,867	5,699	597	15. Diseases of the Heart, and Dropsy.
82,492	48,045	40,209	27,148	10,914	1,618	16. Diseases of the Lungs.
19,985	17,554	13,538	7,925	2,375	245	17. Diseases of the Stomach and Liver.
9,483	8,545	7,206	5,176	2,140	271	18. Diseases of the Kidneys.
185	89	68	44	16	3	19. Diseases of the Generative Organs.
924	738	587	286	78	7	20. Diseases of the Joints.
894	735	616	436	187	30	21. Diseases of the Skin.
—	—	—	—	—	—	22. Childbirth and Metria.
						Violent Deaths.
2,178	1,757	1,158	499	112	10	23. Suicide.
11,127	8,220	5,344	2,784	999	183	24. Other Violent Deaths.
62,431	61,220	59,063	54,220	39,193	11,958	25. Other Causes.

TABLE 14.—**Table of Mortality**, derived from the ENGLISH LIFE TABLE, showing **AT AND AFTER**

The TABLE shows also, according to the English Life Table, the annual Births being 488,255; 12 Ages, of 25 Classes of Causes, out

AGE x - - -	0	5	10	15	20	25
TOTAL DEATHS at Age x and upwards - - - - -	488,255	366,460	349,478	340,273	329,142	314,603
TOTAL ZYMOTIC DISEASES—Order 1.	86,427	43,622	33,720	30,095	27,696	25,481
ZYMOTIC DISEASES—Order 1.						
1. Small-pox - - - - - - -	2,929	1,289	891	765	637	472
2. Measles - - - - - - - -	6,356	732	163	90	68	51
3. Scarlatina - - - - - - -	14,864	6,163	1,800	771	523	360
4. Diphtheria - - - - - - -	2,630	1,409	636	353	269	215
5. Whooping-cough - - - - -	8,384	451	35	11	7	6
6. Typhus - - - - - - - -	18,992	16,264	14,119	12,501	10,962	9,637
7. Diarrhœa and Dysentery - - -	16,812	7,857	7,140	7,063	6,992	6,864
8. Cholera - - - - - - - -	3,005	2,492	2,307	2,228	2,167	2,057
9. Other Zymotic Diseases—Order 1. -	12,455	7,465	6,629	6,813	6,071	5,819
FIVE CONSTITUTIONAL DISEASES.						
10. Cancer - - - - - - - -	14,517	14,481	14,464	14,448	14,420	14,365
11. Scrofula and Tabes - - - -	6,504	2,759	2,273	1,900	1,614	1,384
12. Phthisis - - - - - - -	57,561	55,376	54,230	51,981	46,718	39,440
13. Hydrocephalus - - - - -	4,809	899	286	109	67	52
LOCAL DISEASES.						
14. Diseases of the Brain - - - -	57,097	39,612	38,459	37,808	37,172	36,431
15. Diseases of the Heart, and Dropsy -	40,170	39,479	39,033	38,491	37,939	37,251
16. Diseases of the Lungs - - - -	69,007	50,118	48,904	48,460	47,945	47,243
17. Diseases of the Stomach and Liver -	26,542	24,507	24,052	23,719	23,295	22,654
18. Diseases of the Kidneys - - -	4,004	3,888	3,811	3,738	3,652	3,500
19. Diseases of the Generative Organs -	2,932	2,922	2,921	2,916	2,891	2,810
20. Diseases of the Joints - - - -	1,483	1,369	1,249	1,120	1,011	930
21. Diseases of the Skin - - - -	1,206	891	871	853	839	816
22. CHILDBIRTH AND METRIA - -	6,921	6,921	6,921	6,921	6,677	5,577
VIOLENT DEATHS.						
23. Suicide - - - - - - - -	873	873	873	867	819	764
24. Other Violent Deaths - - - -	7,393	5,139	4,363	4,082	3,889	3,729
25. OTHER CAUSES - - - - -	100,809	73,604	73,048	72,765	72,498	72,176

out of 488,255 **Girls** BORN ALIVE, the NUMBERS DYING of the **various Diseases** TWELVE AGES.

the annual Deaths 488,255; the numbers of Females dying annually **at and after** each of of a Female Population of 20,432,046.

35	45	55	65	75	85	- - - AGE *x*.
283,143	249,207	211,576	158,275	85,347	21,688	{TOTAL DEATHS **at Age** *x* **and upwards.**
21,783	18,143	14,533	9,982	4,528	841	TOTAL ZYMOTIC DISEASES—Order 1.
						ZYMOTIC DISEASES—Order 1.
250	128	61	23	7	1	1. Small-pox.
24	11	5	2	1	—	2. Measles.
106	76	38	14	3	—	3. Scarlatina.
145	97	59	29	9	1	4. Diphtheria.
4	3	2	1	—	—	5. Whooping-cough.
7,803	5,774	4,024	2,238	718	83	6. Typhus.
6,457	6,051	5,494	4,357	2,391	515	7. Diarrhœa and Dysentery.
1,730	1,325	932	514	169	24	8. Cholera.
5,294	4,678	3,918	2,784	1,230	217	9. Other Zymotic Diseases—Order 1.
						FIVE CONSTITUTIONAL DISEASES.
13,977	12,101	8,658	4,623	1,419	188	10. Cancer.
1,022	735	471	221	54	4	11. Scrofula and Tabes.
25,077	13,746	6,437	2,104	319	28	12. Phthisis.
35	25	16	8	2	—	13. Hydrocephalus.
						LOCAL DISEASES.
34,694	32,165	27,886	20,266	8,954	1,351	14. Diseases of the Brain.
36,571	32,030	26,843	17,776	6,385	706	15. Diseases of the Heart, and Dropsy.
46,225	42,266	36,899	26,301	11,322	1,892	16. Diseases of the Lungs.
20,925	18,334	14,433	8,646	2,807	318	17. Diseases of the Stomach and Liver.
3,073	2,518	1,873	1,073	324	39	18. Diseases of the Kidneys.
2,494	1,925	1,196	563	141	13	19. Diseases of the Generative Organs.
778	615	436	239	68	8	20. Diseases of the Joints.
758	664	589	425	186	31	21. Diseases of the Skin.
2,676	160	—	—	—	—	22. CHILDBIRTH AND METRIA.
						VIOLENT DEATHS.
652	509	305	138	33	4	23. Suicide.
3,420	3,047	2,569	1,974	1,187	312	24. Other Violent Deaths.
71,263	70,204	68,432	63,936	47,618	15,953	25. OTHER CAUSES.

TABLE 15.—**Table showing out of 1,000,000 CHILDREN BORN ALIVE of BOTH SEXES, of 511,745 Males and Females respectively, dying at and after**

SEX - - - -	CHILDREN OF BOTH SEXES.						
AGE x - - - -	0	1	2	3	4	0	1
DEATHS FROM ALL CAUSES at Age x and upwards - - - - -	1,000,000	850,507	796,827	768,589	750,133	511,745	426,026
TOTAL ZYMOTIC DISEASES—Order 1. -	175,619	144,353	122,576	107,765	96,715	89,192	72,447
ZYMOTIC DISEASES—Order 1.							
1. Small-pox - - - - - - -	6,521	5,211	4,528	3,975	3,529	3,592	2,902
2. Measles - - - - - - - -	12,865	10,684	6,164	3,559	2,154	6,509	5,316
3. Scarlatina - - - - - - -	30,021	28,339	24,555	19,941	15,595	15,157	14,226
4. Diphtheria - - - - - - -	4,945	4,564	4,038	3,527	2,998	2,315	2,096
5. Whooping-cough - - - - -	15,161	9,287	4,772	2,540	1,370	6,777	3,928
6. Typhus - - - - - - - -	38,107	37,328	36,217	34,956	33,777	19,115	18,636
7. Diarrhœa and Dysentery - - -	34,366	19,855	15,589	14,590	14,226	17,554	9,590
8. Cholera - - - - - - - -	6,155	5,674	5,434	5,270	5,139	3,150	2,883
9. Other Zymotic Diseases—Order 1. -	27,478	23,411	21,279	19,407	17,927	15,023	12,820
FIVE CONSTITUTIONAL DISEASES.							
10. Cancer - - - - - - - -	21,311	21,295	21,285	21,269	21,252	6,794	6,786
11. Scrofula and Tabes - - - -	14,106	10,130	7,758	6,761	6,296	7,602	5,397
12. Phthisis - - - - - - -	114,417	112,767	111,470	110,749	110,319	56,856	55,972
13. Hydrocephalus - - - - -	11,252	7,542	4,627	3,289	2,516	6,443	4,228
LOCAL DISEASES.							
14. Diseases of the Brain - - - -	121,859	91,222	86,325	84,038	82,696	64,762	47,075
15. Diseases of the Heart, and Dropsy -	76,660	76,035	75,733	75,510	75,327	36,490	36,151
16. Diseases of the Lungs - - - -	149,585	127,590	116,356	111,785	109,458	80,578	67,904
17. Diseases of the Stomach and Liver -	52,497	49,272	48,624	48,228	47,957	25,955	24,008
18. Diseases of the Kidneys - - -	14,910	14,849	14,787	14,726	14,663	10,906	10,868
19. Diseases of the Generative Organs -	3,062	3,053	3,047	3,044	3,042	130	124
20. Diseases of the Joints - - - -	3,395	3,335	3,284	3,239	3,196	1,912	1,881
21. Diseases of the Skin - - - -	2,512	2,029	1,931	1,887	1,866	1,306	1,045
22. CHILDBIRTH AND METRIA - - -	6,921	6,921	6,921	6,921	6,921	—	—
VIOLENT DEATHS.							
23. Suicide - - - - - - - -	3,479	3,479	3,479	3,479	3,479	2,606	2,606
24. Other Violent Deaths - - - -	30,052	28,168	27,248	26,323	25,541	22,659	21,660
25. OTHER CAUSES - - - - -	196,363	148,467	141,376	139,576	138,887	97,554	69,874

Male Children, of 488,255 **Female Children so born**, the **Numbers of both Sexes**, and of the exact ages 0, 1, 2, 3, and 4 years, of different **Diseases.**

MALES.			FEMALES.					- - - - SEX.
2	3	4	0	1	2	3	4	- - - - AGE *x*.
488,505	386,290	377,077	488,255	422,481	396,322	382,299	373,056	{Deaths from All Causes at Age *x* and upwards.
61,637	54,370	48,933	86,427	71,906	60,939	53,395	47,777	Total Zymotic Diseases—Order 1.
								Zymotic Diseases—Order 1.
2,566	2,291	2,072	2,929	2,309	1,962	1,684	1,457	1. Small-pox.
3,069	1,704	1,020	6,356	5,368	3,164	1,855	1,134	2. Measles.
12,271	9,918	7,704	14,864	14,113	12,284	10,023	7,891	3. Scarlatina.
1,825	1,579	1,328	2,630	2,468	2,213	1,948	1,670	4. Diphtheria.
1,987	1,010	589	8,884	5,359	2,835	1,530	831	5. Whooping-cough.
18,181	17,515	16,946	18,992	18,642	18,066	17,441	16,831	6. Typhus.
7,461	6,959	6,771	16,812	10,265	8,128	7,631	7,455	7. Diarrhœa and Dysentery.
2,755	2,664	2,594	3,005	2,791	2,679	2,606	2,545	8. Cholera.
11,691	10,730	9,964	12,455	10,591	9,588	8,677	7,963	9. Other Zymotic Diseases—Order 1.
								Five Constitutional Diseases.
6,781	6,773	6,765	14,517	14,509	14,504	14,496	14,487	10. Cancer.
4,189	3,636	3,393	6,504	4,733	3,598	3,125	2,905	11. Scrofula and Tabes.
55,512	54,954	54,747	57,561	56,795	56,158	55,795	55,572	12. Phthisis.
2,588	1,776	1,362	4,809	3,314	2,099	1,513	1,154	13. Hydrocephalus.
								Local Diseases.
44,595	43,332	42,653	57,097	44,147	41,820	40,706	40,043	14. Diseases of the Brain.
35,993	35,871	35,771	40,170	39,884	39,740	39,639	39,556	15. Diseases of the Heart, and Dropsy.
62,973	59,795	58,658	69,007	59,686	54,281	51,990	50,800	16. Diseases of the Lungs.
23,673	23,465	23,332	26,542	25,264	24,951	24,768	24,625	17. Diseases of the Stomach and Liver.
10,833	10,795	10,756	4,004	3,981	3,954	3,931	3,907	18. Diseases of the Kidneys.
122	121	120	2,932	2,929	2,925	2,923	2,922	19. Diseases of the Generative Organs.
1,854	1,829	1,806	1,483	1,454	1,430	1,410	1,390	20. Diseases of the Joints.
986	976	967	1,206	984	935	911	899	21. Diseases of the Skin.
—	—	—	6,921	6,921	6,921	6,921	6,921	22. Childbirth and Metria.
								Violent Deaths.
2,606	2,606	2,606	873	873	873	873	873	23. Suicide.
21,140	20,594	20,188	7,396	6,506	6,106	5,729	5,403	24. Other Violent Deaths.
68,290	65,297	65,065	100,809	78,593	75,086	74,179	73,822	25. Other Causes.

FORMULAS for determining the probability of dying at or after any Age x of any particular Disease specified in Tables 7–15.

[*The symbols must be taken here for that which they are defined to mean; and they must not be confounded with the same symbols having a totally different meaning in other investigations, and most particularly in the Life Table.*]

Let l_x = the numbers to die at and after age x.

s_x = the numbers to die of small-pox according to Tables 7 to 11 in any 1, 5, or 10 years after age x.

S_x = all the numbers to die of small-pox at and after age x. (*See* Tables 12–15.)

m_x = the numbers to die of measles according to the same Tables in any 1, 5, or 10 years after age x.

M_x = all the numbers to die of measles at and after age x.

And in like manner symbols might be used for each of the 25 diseases or groups of diseases.

Some of the uses of the Tables may be thus exemplified by figures taken from the Tables :—

(1.) What is the probability that a liveborn child (A) will die of small-pox in the first five years of life ?

It is $\frac{s_0}{l_0} = \frac{3331}{1000000} = \cdot 003331 = \frac{1}{300}$ nearly. (See Table 7 or 10.)

(2.) What is the probability that A will die at any age of small-pox ?

$$\frac{S_0}{l_0} = \frac{6521}{1000000} = \cdot 006521 = \frac{1}{153} \text{ nearly.} \quad \text{(See Table 12.)}$$

(3.) What is the probability that a person aged 20 will die of small-pox ?

$$\frac{S_{20}}{l_{20}} = \frac{1822}{662750} = \cdot 00275 = \frac{1}{364} \text{ nearly.} \quad \text{(See Table 12.)}$$

(4.) What is the probability that a person aged 25 will die of phthisis (P) ?

$$\frac{P_{25}}{l_{25}} = \frac{81424}{634045} = \cdot 12842 = \frac{1}{8} \text{ nearly.} \quad \text{(See Table 12.)}$$

It is, therefore, nearly 1 chance to 7 that the person will die of that disease, and 7 to 1 that he will die of some other cause.

(5.) What is the probability that a woman aged 20 will die of child-birth (c) before she is 25 ? (See Table 9.)

$$\frac{c_{20}}{l_{20}} = \frac{1100}{329142} = \cdot 00334 = \frac{1}{299} \text{ nearly.}$$

(6.) What is the probability that she will eventually die of childbirth after age 20 ? (See Table 14.)

$$\frac{C_{20}}{l_{20}} = \frac{6677}{329142} = \cdot 02029 = \frac{1}{49} \text{ nearly.}$$

The chances are 48 to 1 that she will not die of childbirth.

(7.) What is the probability that a man aged 20 will die a violent death other than by suicide (= v) before he is 25? (See Table 8.)

$$\frac{v_{20}}{l_{20}} = \frac{1517}{333608} = \cdot 00455 = \frac{1}{220} \text{ nearly.}$$

(8.) What is the probability that he will eventually die a violent death other than by suicide after age 20? (See Table 13.)

$$\frac{V_{20}}{l_{20}} = \frac{15636}{333608} = \cdot 04687 = \frac{1}{21} \text{ nearly.}$$

(9.) Of what specified disease is a man aged 65 most likely to die?

Disease of lungs. (See Table 13.)

Of the 24 classes specified, the diseases of the lungs (L) are the most fatal; of them 27,148 will die out of 150,754 men living at age 65.

$$\frac{L_{65}}{l_{65}} = \frac{27148}{150754} = \cdot 18008 = \frac{1}{6} \text{ nearly.}$$

The probability of dying of brain disease is

$$\frac{20304}{150754} = \cdot 13468 = \frac{1}{7} \text{ nearly.}$$

The probability of dying of heart disease or dropsy is

$$\frac{15887}{150754} = \cdot 10538 = \frac{1}{9} \text{ nearly.}$$

The probability of dying of old age, debility, and other unclassified diseases is

$$\frac{54280}{150754} = \cdot 36006 = \frac{1}{3} \text{ nearly.}$$

The probabilities that a liveborn child will die of any of the 25 diseases or classes of diseases are as follows:—

Small-pox	·006521	Diseases of Brain	·121859
Measles	·012865	Diseases of Heart & Dropsy	·076660
Scarlatina	·030021	Diseases of Lungs	·149585
Diphtheria	·004945	Dis. of Lungs *and* Phthisis	·264002
Whooping-cough	·015161	Diseases of Stom. & Liver	·052497
Typhus	·038107	Diseases of Kidneys	·014910
Diarrhœa and Dysentery	·034366	Diseases of Gener. Organs	·003062
Cholera	·006155	Diseases of Joints	·003395
Other Zymotic Diseases.—Order I.	·027478	Diseases of Skin	·002512
		Childbirth and Metria	·006921
Cancer	·021311	Suicide	·003479
Scrofula and Tabes	·014106	Other Violent Deaths	·030052
Phthisis	·114417	Other Causes	·198363
Hydrocephalus	·011252		

These probabilities are deduced by simple inspection of Table 12.

The same table shows by inspection what the probability is that a child will die of these causes *after* any specified age; thus, the probability that a liveborn child will die of small-pox after he has attained the age of 20 is $\frac{1822}{1000000} = \cdot 001822 = \frac{1}{549}$ nearly, whereas the chance that a young person now 20 will die of small-pox is, as shown above, $\frac{1822}{662750} = \cdot 00275 = \frac{1}{364}$ nearly.

TABLE 16.—**Table of Mortality,** derived from the HEALTHY DISTRICTS LIFE TABLE, showing of

AGES	ALL AGES.	0— (*See* Table 19.)	5—	10—	15—	20—
DEATHS FROM ALL CAUSES	1,000,000	175,410	29,341	16,677	22,571	28,449
TOTAL ZYMOTIC DISEASES—Order 1.	124,889	49,761	16,351	6,439	4,809	3,952
ZYMOTIC DISEASES—Order 1.						
Small-pox	2,359	602	90	76	121	239
Measles	6,912	5,257	1,065	267	143	30
Scarlatina	21,403	11,373	6,359	1,699	638	398
Diphtheria	10,292	4,184	3,228	1,339	434	208
Whooping-cough	10,234	9,650	534	32	12	6
Typhus	28,146	2,807	2,665	2,299	2,653	2,373
Diarrhœa and Dysentery	21,217	9,354	470	59	154	153
Cholera	2,244	399	182	60	51	98
Other Zymotic Diseases—Order 1.	22,082	6,135	1,758	608	603	447
FIVE CONSTITUTIONAL DISEASES.						
Cancer	27,495	110	74	27	69	61
Scrofula and Tabes	12,655	5,335	977	844	847	642
Phthisis	108,481	2,656	1,573	2,940	8,872	14,499
Hydrocephalus	8,591	6,604	1,353	420	102	36
LOCAL DISEASES.						
Diseases of the Brain	125,473	22,662	1,901	1,333	1,836	1,732
Diseases of the Heart, and Dropsy	105,410	1,304	791	927	1,041	1,107
Diseases of the Lungs	129,618	27,884	2,258	840	1,212	1,372
Diseases of the Stomach and Liver	57,079	4,431	901	589	991	973
Diseases of the Kidneys	21,121	310	260	190	247	379
Diseases of the Generative Organs	3,241	9	6	6	40	49
Diseases of the Joints	3,356	311	169	225	224	191
Diseases of the Skin	2,959	723	62	96	58	42
CHILDBIRTH AND METRIA	7,065	—	—	—	209	1,053
VIOLENT DEATHS.						
Suicide	4,487	—	—	32	114	233
Other Violent Deaths	26,694	4,232	1,619	1,270	1,375	1,462
OTHER CAUSES	231,386	49,048	1,046	499	525	666

NOTE.—The numbers dying at the various Ages from All Causes are derived from the preceding Healthy Districts the observed deaths from those diseases in 51 of the Healthiest

what Diseases and at what Ages 1,000,000 LIVEBORN CHILDREN may be expected to die.

25—	35—	45—	55—	65—	75—	85 and upwards.	- - - AGES.
59,612	61,921	71,932	109,482	177,391	177,252	69,956	DEATHS FROM ALL CAUSES.
5,831	5,161	5,035	7,429	10,309	7,505	2,307	TOTAL ZYMOTIC DIS.—Order 1.
							ZYMOTIC DISEASES—Order 1.
346	243	250	264	55	46	27	Small-pox.
42	45	8	30	11	—	14	Measles.
456	251	117	68	44	—	—	Scarlatina.
302	228	141	136	55	23	14	Diphtheria.
—	—	—	—	—	—	—	Whooping-cough.
3,116	2,702	2,306	3,025	2,791	1,268	141	Typhus.
519	471	524	1,104	3,263	3,643	1,503	Diarrhœa and Dysentery.
142	206	233	293	353	173	54	Cholera.
906	1,015	1,456	2,509	3,737	2,352	554	Other Zymotic Dis.—Order 1.
							FIVE CONSTITUTIONAL DIS.
679	2,218	5,024	7,266	7,808	3,552	607	Cancer.
1,035	736	766	722	551	173	27	Scrofula and Tabes.
27,920	20,625	13,745	10,121	4,754	749	27	Phthisis.
28	22	16	10	—	—	—	Hydrocephalus.
							LOCAL DISEASES.
4,100	6,453	10,012	16,701	29,031	24,697	4,925	Diseases of the Brain.
3,513	6,513	10,451	21,018	34,548	21,172	2,725	Diseases of the Heart, & Dropsy.
3,553	5,261	8,234	16,680	30,534	25,389	6,121	Diseases of the Lungs.
2,947	4,003	7,253	12,240	14,553	7,150	1,148	Diseases of the Stomach & Liver.
1,135	1,743	2,319	4,001	5,981	3,730	826	Diseases of the Kidneys.
257	576	778	665	647	174	54	Diseases of the Generat. Organs.
491	353	441	410	431	173	27	Diseases of the Joints.
90	147	191	410	562	484	85	Diseases of the Skin.
2,363	2,692	259	—	—	—	—	CHILDBIRTH AND METRIA.
							VIOLENT DEATHS.
396	582	1,022	1,171	763	207	27	Suicide.
2,819	2,593	3,030	2,761	2,796	2,088	649	Other Violent Deaths.
1,527	2,303	3,362	7,877	34,123	80,009	50,401	OTHER CAUSES.

Life Table; the numbers dying from each of the 25 classes of causes, at different periods of life, are deduced from **Districts of England and Wales during the 10 Years 1861-70.**

TABLE 17.—**Table of Mortality**, derived from the HEALTHY DISTRICTS LIFE TABLE, **expected**

AGES - - - -	ALL AGES.	0— (*See* Table 20.)	5—	10—	15—	20—
DEATHS FROM ALL CAUSES - -	511,249	95,040	14,522	7,470	10,341	13,809
TOTAL ZYMOTIC DISEASES—Order 1.	63,607	25,875	7,737	2,620	2,258	1,944
ZYMOTIC DISEASES—Order 1.						
Small-pox - - - - - - -	1,514	324	67	30	70	166
Measles - - - - - - -	3,514	2,774	484	111	64	18
Scarlatina - - - - - - -	10,779	5,817	3,217	835	367	197
Diphtheria - - - - - - -	4,478	2,065	1,352	412	169	68
Whooping-cough - - - -	4,828	4,584	212	20	6	6
Typhus - - - - - - -	14,125	1,411	1,163	885	1,140	1,144
Diarrhœa and Dysentery - - -	11,337	5,312	234	30	81	68
Cholera - - - - - - -	1,135	242	67	25	23	25
Other Zymotic Diseases—Order 1. -	11,897	3,346	941	272	338	252
FIVE CONSTITUTIONAL DISEASES.						
Cancer - - - - - - -	9,350	57	45	15	29	49
Scrofula and Tabes - - - -	6,613	2,902	551	427	390	326
Phthisis - - - - - - -	52,282	1,224	618	975	3,392	6,631
Hydrocephalus - - - - -	4,746	3,837	662	171	29	18
LOCAL DISEASES.						
Diseases of the Brain - - -	66,030	12,604	963	568	786	886
Diseases of the Heart, and Dropsy -	50,475	656	451	452	471	535
Diseases of the Lungs - - -	70,960	15,212	1,130	342	710	849
Diseases of the Stomach and Liver -	28,993	2,600	429	282	460	425
Diseases of the Kidneys - - -	15,382	175	156	80	140	203
Diseases of the Generative Organs -	144	5	—	—	6	—
Diseases of the Joints - - -	1,787	168	83	121	134	142
Diseases of the Skin - - - -	1,560	421	33	50	35	18
CHILDBIRTH AND METRIA - -	—	—	—	—	—	—
VIOLENT DEATHS.						
Suicide - - - - - - -	3,555	—	—	15	58	172
Other Violent Deaths - - -	20,339	2,362	1,124	1,036	1,245	1,316
OTHER CAUSES - - - - -	115,426	26,942	540	256	198	295

showing of what **Diseases** and at what **Ages** 511,249 **Boys** BORN ALIVE **may be to die.**

25—	35—	45—	55—	65—	75—	85 and upwards.	- - - AGES.
29,671	30,679	37,919	57,982	92,629	88,991	32,796	DEATHS FROM ALL CAUSES.
2,982	2,570	2,844	4,116	5,481	4,154	1,126	TOTAL ZYMOTIC DIS.—Order 1.
							ZYMOTIC DISEASES—Order 1.
242	169	166	176	44	46	14	Small-pox.
14	15	—	20	—	—	14	Measles.
164	81	50	29	22	—	—	Scarlatina.
149	95	41	68	33	12	14	Diphtheria.
—	—	—	—	—	—	—	Whooping-cough.
1,588	1,278	1,252	1,794	1,628	771	101	Typhus.
185	228	340	527	1,650	2,002	680	Diarrhœa and Dysentery.
83	117	116	156	188	69	14	Cholera.
477	587	879	1,346	1,916	1,254	289	Other Zymotic Dis.—Order 1.
							FIVE CONSTITUTIONAL DIS.
178	448	1,194	2,292	3,178	1,576	289	Cancer.
534	404	323	351	299	92	14	Scrofula and Tabes.
13,272	9,840	7,155	5,963	2,735	472	—	Phthisis.
14	7	8	—	—	—	—	Hydrocephalus.
							LOCAL DISEASES.
2,178	3,583	5,513	8,688	15,206	12,770	2,285	Diseases of the Brain.
1,907	3,253	5,107	9,858	16,247	10,193	1,345	Diseases of the Heart, & Dropsy.
2,192	3,114	5,215	9,605	16,468	13,173	2,950	Diseases of the Lungs.
1,389	2,144	3,465	6,406	7,520	3,325	578	Diseases of the Stomach & Liver.
676	1,013	1,583	2,672	4,829	3,175	680	Diseases of the Kidneys.
21	15	17	10	44	12	14	Diseases of the Generat. Organs.
171	198	182	205	277	92	14	Diseases of the Joints.
43	51	99	224	321	207	58	Diseases of the Skin.
—	—	—	—	—	—	—	CHILDBIRTH AND METRIA.
							VIOLENT DEATHS.
386	485	796	917	631	161	14	Suicide.
2,589	2,298	2,578	2,321	2,171	955	304	Other Violent Deaths.
769	1,256	1,840	4,349	17,222	38,034	23,125	OTHER CAUSES.

TABLE 18.—**Table of Mortality**, derived from the HEALTHY DISTRICTS LIFE TABLE, **expected**

AGES	ALL AGES.	0— (*See* Table 20.)	5—	10—	15—	20—
DEATHS FROM ALL CAUSES	488,751	80,370	14,819	9,207	12,230	14,640
TOTAL ZYMOTIC DISEASES—Order 1.	61,282	23,886	8,614	3,819	2,551	2,008
ZYMOTIC DISEASES—Order 1.						
Small-pox	845	278	23	46	51	73
Measles	3,398	2,483	581	156	79	12
Scarlatina	10,624	5,556	3,142	864	271	201
Diphtheria	5,814	2,119	1,876	927	265	140
Whooping-cough	5,406	5,066	322	12	6	—
Typhus	14,021	1,396	1,502	1,414	1,513	1,229
Diarrhœa and Dysentery	9,880	4,042	236	29	73	85
Cholera	1,109	157	115	35	28	73
Other Zymotic Diseases—Order 1.	10,185	2,789	817	336	265	195
FIVE CONSTITUTIONAL DISEASES.						
Cancer	18,145	53	29	12	40	12
Scrofula and Tabes	6,042	2,433	426	417	457	316
Phthisis	56,199	1,432	955	1,965	5,480	7,868
Hydrocephalus	3,845	2,767	691	249	73	18
LOCAL DISEASES.						
Diseases of the Brain	59,443	10,088	938	765	1,050	846
Diseases of the Heart, and Dropsy	54,935	648	340	475	570	572
Diseases of the Lungs	58,658	12,672	1,128	498	502	523
Diseases of the Stomach and Liver	28,086	1,831	472	307	531	548
Diseases of the Kidneys	5,739	135	104	110	107	176
Diseases of the Generative Organs	3,097	4	6	6	34	49
Diseases of the Joints	1,569	143	86	104	90	49
Diseases of the Skin	1,399	302	29	46	23	24
CHILDBIRTH AND METRIA	7,065	—	—	—	209	1,053
VIOLENT DEATHS.						
Suicide	932	—	—	17	56	61
Other Violent Deaths	6,355	1,870	495	174	130	146
OTHER CAUSES	115,960	22,106	506	243	327	371

...ving of what **Diseases** and at what **Ages** 488,751 **Girls** BORN ALIVE may ... die.

25—	35—	45—	55—	65—	75—	85 and upwards.	AGES.
3,541	31,242	34,019	51,500	84,763	88,281	37,160	DEATHS FROM AL
1,949	2,291	2,191	3,313	4,828	3,351	1,181	TOTAL ZYMOTIC D
							ZYMOTIC DISEAS
104	74	84	88	11	—	13	Small-pox.
20	30	6	10	11	—	—	Measles.
202	170	67	39	23	—	—	Scarlatina.
158	133	100	68	22	11	—	Diphtheria.
—	—	—	—	—	—	—	Whooping-cough.
1,558	1,424	1,054	1,231	1,163	497	40	Typhus.
304	243	164	677	1,613	1,641	823	Diarrhœa and Dys
40	80	117	137	165	104	40	Cholera.
431	428	377	1,163	1,821	1,098	265	Other Zymotic Dis
							FIVE CONSTITUT
301	1,770	3,830	4,974	4,630	1,976	318	Cancer.
501	332	443	371	253	81	13	Scrofula and Tabes
14,648	10,785	6,590	4,153	2,019	277	27	Phthisis.
14	13	8	10	—	—	—	Hydrocephalus.
							LOCAL DIS
1,981	2,870	4,499	6,012	13,825	11,927	2,640	Diseases of the Br
1,906	3,260	5,344	11,160	18,301	10,979	1,380	Diseases of the He
1,641	2,147	3,019	7,075	14,066	12,216	3,171	Diseases of the Lu
1,488	1,859	3,788	5,834	7,033	3,825	570	Diseases of the Sto
459	730	736	1,329	1,152	555	146	Diseases of the Ki
216	561	761	655	603	162	40	Diseases of the Ge
200	155	259	206	154	81	13	Diseases of the Jo
56	96	92	186	241	277	27	Diseases of the Sk
2,502	2,692	250	—	—	—	—	CHILDBIRTH AND
							VIOLENT D
90	37	236	254	132	46	13	Suicide.
200	206	452	[illegible]	635	1,133	345	Other Violent Des
780	1,047	1,582	3,528	16,901	41,375	27,276	OTHER CAUSES.

TABLE **19.—Table** showing out of 1,000,000 LIVEBORN CHILDREN what **Numbers die** of the different **Diseases** in the **first Five Years of Life.**

(This Table is a development of Column 2. of Table 16. It shows the deaths at *each year* of age under 5.)

CHILDREN OF BOTH SEXES.						
AGES - - - -	Total under 5 Years.	0—	1—	2—	3—	4—5
DEATHS FROM ALL CAUSES - -	175,410	102,950	30,050	18,850	13,050	10,510
TOTAL ZYMOTIC DISEASES—Order 1.	49,761	16,321	10,924	8,885	7,239	6,392
ZYMOTIC DISEASES—Order 1.						
Small-pox - - - - - - -	602	348	39	57	61	97
Measles - - - - - - -	5,257	988	1,973	1,208	591	497
Scarlatina - - - - - - -	11,373	930	2,160	2,838	2,926	2,519
Diphtheria - - - - - - -	4,184	426	734	890	949	1,185
Whooping-cough - - - - -	9,650	4,644	2,703	1,369	562	372
Typhus - - - - - - -	2,807	375	528	620	697	587
Diarrhœa and Dysentery - - -	9,354	6,793	1,513	603	311	134
Cholera - - - - - - -	399	206	75	51	40	27
Other Zymotic Diseases—Order 1. -	6,135	1,611	1,199	1,249	1,102	974
FIVE CONSTITUTIONAL DISEASES.						
Cancer - - - - - - - -	110	8	4	28	31	39
Scrofula and Tabes - - - -	5,335	2,782	1,286	733	305	229
Phthisis - - - - - - -	2,656	856	778	450	325	247
Hydrocephalus - - - - -	6,604	2,501	1,887	988	767	461
LOCAL DISEASES.						
Diseases of the Brain - - -	22,692	16,142	3,251	1,681	949	669
Diseases of the Heart, and Dropsy -	1,304	621	214	163	169	137
Diseases of the Lungs - - -	27,884	16,288	6,244	3,010	1,406	936
Diseases of the Stomach and Liver -	4,431	3,037	469	362	315	248
Diseases of the Kidneys - - -	310	69	61	73	51	56
Diseases of the Generative Organs -	9	—	4	—	5	—
Diseases of the Joints - - -	311	69	70	74	36	62
Diseases of the Skin - - - -	723	534	75	57	41	16
CHILDBIRTH AND METRIA - -	—	—	—	—	—	—
VIOLENT DEATHS.						
Suicide - - - - - - -	—	—	—	—	—	—
Other Violent Deaths - - -	4,232	1,341	813	835	718	525
OTHER CAUSES - - - -	49,048	42,381	3,970	1,511	693	493

TABLE 20.—**Table** showing out of 511,249 MALE CHILDREN, and of 488,751 FEMALE CHILDREN, BORN ALIVE, the **Numbers** of **Male and Female Children** respectively who **die** of the **different Diseases** in the **first Five Years** [illegible]

SEX - -		
AGES - -		
DEATHS FROM ALL CAUSES - - -		
TOTAL ZYMOTIC DISEASES—Order 1. -		
ZYMOTIC DISEASES—Order 1.		
Small-pox - - - -		
Measles - - - -		
Scarlatina - - -		
Diphtheria - - -		
Whooping-cough - -		
Typhus - - - -		
Diarrhœa and Dysentery		
Cholera - - - -		
Other Zymotic Diseases, —Order 1. - - -		
DIATHETIC DISEASES.		
Cancer - - - -		
Scrofula and Tabes - -		
Phthisis - - - -		
Hydrocephalus - -		
LOCAL DISEASES.		
Diseases of the Brain -		
Dis. of the Heart, & Dropsy		
Diseases of the Lungs -		
Dis. of Stomach & Liver		
Diseases of the Kidneys -		
Dis. of Generative Organs		
Diseases of the Joints -		
Diseases of the Skin -		
CHILDBIRTH & MEPHRIA		
VIOLENT DEATHS.		
Suicide - - - -		
Other Violent Deaths -		
OTHER CAUSES - -		

Table 21.—Table of Mortality, derived from the Healthy Districts Life Tabl
Twelv

The Table shows also, according to the Healthy Districts Life Table, the Annual Birth
and after each of 12 Ages of 25 Classes o

AGE x - - -	0	5	10	15	20	25
Deaths from All Causes at Age x and upwards - -	1,000,000	824,590	795,249	778,572	756,001	727,552
Total Zymotic Diseases—Order 1.	124,889	75,128	58,777	52,338	47,529	43,577
Zymotic Diseases—Order 1.						
Small-pox - - - - - - -	2,359	1,757	1,667	1,591	1,470	1,231
Measles - - - - - - -	6,912	1,655	590	323	180	150
Scarlatina - - - - - - -	21,403	10,030	3,671	1,972	1,334	936
Diphtheria - - - - - - -	10,292	6,108	2,880	1,541	1,107	899
Whooping-cough - - - - -	10,234	584	50	18	6	—
Typhus - - - - - - -	28,146	25,339	22,674	20,375	17,722	15,349
Diarrhœa and Dysentery - - -	21,217	11,863	11,393	11,334	11,180	11,027
Cholera - - - - - - -	2,244	1,845	1,663	1,603	1,552	1,454
Other Zymotic Diseases—Order 1. -	22,082	15,947	14,189	13,581	12,978	12,531
Five Constitutional Diseases.						
Cancer - - - - - - -	27,495	27,385	27,311	27,284	27,215	27,154
Scrofula and Tabes - - - - -	12,655	7,320	6,343	5,499	4,652	4,010
Phthisis - - - - - - -	108,481	105,825	104,252	101,312	92,440	77,941
Hydrocephalus - - - - -	8,591	1,987	634	214	112	76
Local Diseases.						
Diseases of the Brain - - -	125,473	102,781	100,880	99,547	97,711	95,979
Diseases of the Heart, and Dropsy -	105,410	104,106	103,315	102,388	101,347	100,240
Diseases of the Lungs - - -	129,618	101,734	99,476	98,636	97,424	96,052
Diseases of the Stomach and Liver -	57,079	52,648	51,747	51,158	50,167	49,194
Diseases of the Kidneys - - -	21,121	20,811	20,551	20,361	20,114	19,735
Diseases of the Generative Organs -	3,241	3,232	3,226	3,220	3,180	3,131
Diseases of the Joints - - -	3,356	3,045	2,876	2,651	2,427	2,236
Diseases of the Skin - - - -	2,959	2,236	2,174	2,078	2,020	1,978
Childbirth and Metria - -	7,065	7,065	7,065	7,065	6,856	5,803
Violent Deaths.						
Suicide - - - - - - -	4,487	4,487	4,487	4,455	4,341	4,108
Other Violent Deaths - - -	26,694	22,462	20,843	19,573	18,198	16,736
Other Causes - - - -	231,386	182,338	181,292	180,793	180,268	179,602

TABLE **22.—Table of Mortality,** derived from the HEALTHY DISTRICTS LIFE TABLE, The TABLE shows also, according to the Healthy Districts Life Table, the Annual Births being of 12 Ages, of 25 Classes of Causes, out

AGE x - - -	0	5	10	15	20	25
DEATHS FROM ALL CAUSES at Age x and upwards	511,249	416,209	401,687	394,217	383,876	370,067
TOTAL ZYMOTIC DISEASES—Order 1.	63,607	37,732	29,995	27,375	25,117	23,173
ZYMOTIC DISEASES—Order 1.						
Small-pox	1,514	1,190	1,123	1,093	1,023	857
Measles	3,514	740	256	145	81	63
Scarlatina	10,779	4,962	1,745	910	543	346
Diphtheria	4,478	2,413	1,061	649	480	412
Whooping-cough	4,828	244	32	12	6	—
Typhus	14,125	12,714	11,551	10,666	9,526	8,382
Diarrhœa and Dysentery	11,337	6,025	5,791	5,761	5,680	5,612
Cholera	1,135	893	826	801	778	753
Other Zymotic Diseases—Order 1.	11,897	8,551	7,610	7,338	7,000	6,748
FIVE CONSTITUTIONAL DISEASES.						
Cancer	9,350	9,293	9,248	9,233	9,204	9,155
Scrofula and Tabes	6,613	3,711	3,160	2,733	2,343	2,017
Phthisis	52,282	51,058	50,440	49,465	46,073	39,442
Hydrocephalus	4,746	909	247	76	47	29
LOCAL DISEASES.						
Diseases of the Brain	66,030	53,426	52,463	51,895	51,109	50,223
Diseases of the Heart, and Dropsy	50,475	49,819	49,368	48,916	48,445	47,910
Diseases of the Lungs	70,960	55,748	54,618	54,276	53,566	52,717
Diseases of the Stomach and Liver	28,993	26,393	25,964	25,682	25,222	24,797
Diseases of the Kidneys	15,382	15,207	15,051	14,971	14,831	14,628
Diseases of the Generative Organs	144	139	139	139	133	133
Diseases of the Joints	1,787	1,619	1,536	1,415	1,281	1,139
Diseases of the Skin	1,560	1,139	1,106	1,056	1,021	1,003
CHILDBIRTH AND METRIA	—	—	—	—	—	—
VIOLENT DEATHS.						
Suicide	3,555	3,555	3,555	3,540	3,482	3,310
Other Violent Deaths	20,339	17,977	16,853	15,757	14,512	13,196
OTHER CAUSES	115,426	88,484	87,944	87,688	87,490	87,195

showing, out of 511,249 Boys BORN ALIVE, the NUMBERS DYING at and after 511,249; the Annual Deaths 511,249; the Numbers of Males dying annually at a of a Male Population of 24,827,450.

35	45	55	65	75	[illegible]	- - - AGE
340,996	310,317	272,398	214,416	121,787	32,796	DEATHS FROM A Age x and u
20,291	17,721	14,877	10,761	5,280	1,126	TOTAL ZYMOTIC DI
						ZYMOTIC DISEA
615	446	280	104	60	14	Small-pox.
49	34	34	14	14	14	Measles.
182	101	[illegible]	22	—	—	Scarlatina.
263	168	127	59	26	14	Diphtheria.
—	—	—	—	—	—	Whooping-cough.
6,324	5,546	4,294	2,500	872	101	Typhus.
5,427	5,199	4,859	4,332	2,682	680	Diarrhœa and Dys
660	543	427	271	83	14	Cholera.
6,271	5,684	4,805	3,459	1,543	[illegible]	Other Zymotic Dis
						FIVE CONSTITUTI
8,977	8,529	7,335	5,043	1,865	[illegible]	Cancer.
1,483	1,079	756	405	106	14	Scrofula and Tabes
26,170	16,330	9,175	3,207	472	—	Phthisis.
15	8	—	—	—	—	Hydrocephalus.
						LOCAL DI
48,045	44,462	38,949	30,261	15,055	2,285	Diseases of the Br
46,083	42,750	37,643	27,785	11,538	1,345	Diseases of the He
50,525	47,411	42,196	32,591	[illegible]	2,950	Diseases of the Lu
23,428	21,294	17,829	11,423	3,903	578	Diseases of the Sto
13,962	12,939	11,356	8,684	3,855	689	Diseases of the Ki
112	97	80	70	26	14	Diseases of the Ge
968	770	586	383	106	[illegible]	Diseases of the Joi
960	909	810	586	265	58	Diseases of the Sk
—	—	—	—	—	—	CHILDBIRTH AND
						VIOLENT
3,004	2,519	1,723	806	175	14	Suicide.
10,627	8,320	5,751	3,430	1,259	304	Other Violent Dea
86,486	85,170	83,380	78,981	61,759	23,125	OTHER CAUSES.

TABLE 23.—**Table of Mortality**, derived from the HEALTHY DISTRICTS LIFE TABLE, showing, The TABLE shows also, according to the Healthy Districts Life Table, the annual Births being each of 12 Ages, of 25 Classes of Causes,

AGE *x*.	0	5	10	15	20	25
TOTAL DEATHS at Age *x* and upwards	468,751	406,881	396,562	384,355	372,125	357,465
TOTAL ZYMOTIC DISEASES—Order 1.	61,282	37,396	26,782	24,963	22,412	20,404
ZYMOTIC DISEASES—Order 1.						
Small-pox	845	567	544	498	447	374
Measles	3,398	915	334	178	99	87
Scarlatina	10,624	5,068	1,926	1,062	791	590
Diphtheria	5,814	3,695	1,819	892	627	487
Whooping-cough	5,406	340	18	6	—	—
Typhus	14,021	12,625	11,123	9,709	8,196	6,967
Diarrhœa and Dysentery	9,880	5,838	5,602	5,573	5,500	5,415
Cholera	1,109	952	837	802	774	701
Other Zymotic Diseases—Order 1.	10,185	7,396	6,579	6,243	5,978	5,783
FIVE CONSTITUTIONAL DISEASES.						
Cancer	18,145	18,092	18,063	18,051	18,011	17,999
Scrofula and Tabes	6,042	3,609	3,183	2,766	2,309	1,993
Phthisis	56,199	54,767	53,812	51,847	46,367	38,469
Hydrocephalus	3,845	1,078	387	138	65	47
LOCAL DISEASES.						
Diseases of the Brain	50,443	49,355	48,417	47,652	46,602	45,756
Diseases of the Heart, and Dropsy	54,935	54,287	53,947	53,472	53,902	52,330
Diseases of the Lungs	58,658	45,966	44,858	44,360	43,858	43,335
Diseases of the Stomach and Liver	28,086	26,255	25,783	25,476	24,945	24,397
Diseases of the Kidneys	5,739	5,604	5,500	5,390	5,283	5,167
Diseases of the Generative Organs	3,097	3,093	3,087	3,081	3,047	2,998
Diseases of the Joints	1,560	1,426	1,340	1,236	1,146	1,097
Diseases of the Skin	1,399	1,097	1,068	1,022	999	975
CHILDBIRTH AND METRIA	7,065	7,065	7,065	7,065	6,856	5,803
VIOLENT DEATHS.						
Suicide	932	932	932	915	859	798
Other Violent Deaths	6,355	4,485	3,990	3,816	3,696	3,540
OTHER CAUSES	115,960	96,854	96,348	96,105	92,778	92,407

out of 488,751 Girls BORN ALIVE, the NUMBERS DYING at and after TWELVE AGES. 488,751 ; the annual Deaths 488,751 ; the Numbers of Females dying annually at and after out of a Female Population of 24,169,200.

35	45	55	65	75	85	- - - AGE *x*.
336,944	295,702	261,683	210,183	125,421	87,160	TOTAL DEATHS at Age *x* and upwards.
17,455	14,864	12,673	9,360	4,532	1,181	TOTAL ZYMOTIC DISEASES—Order 1.
						ZYMOTIC DISEASES—Order 1.
270	196	112	24	13	13	Small-pox.
59	29	21	11	—	—	Measles.
208	128	61	22	—	—	Scarlatina.
234	201	101	33	11	—	Diphtheria.
—	—	—	—	—	—	Whooping-cough.
5,409	3,965	2,951	1,700	587	40	Typhus.
5,061	4,838	4,654	4,077	2,464	823	Diarrhœa and Dysentery.
653	563	446	309	144	40	Cholera.
5,353	4,924	4,347	3,184	1,363	265	Other Zymotic Diseases—Order 1.
						FIVE CONSTITUTIONAL DISEASES.
17,496	15,728	11,898	6,924	2,294	318	Cancer.
1,493	1,160	717	346	94	13	Scrofula and Tabes.
28,351	13,066	6,476	2,323	304	27	Phthisis.
23	18	10	—	—	—	Hydrocephalus.
						LOCAL DISEASES.
43,774	40,904	36,405	28,392	14,567	2,640	Diseases of the Brain.
50,424	47,164	41,820	30,660	12,359	1,380	Diseases of the Heart, and Dropsy.
41,694	39,547	36,528	29,453	15,387	3,171	Diseases of the Lungs.
22,909	21,050	17,962	11,428	4,395	570	Diseases of the Stomach and Liver.
4,643	3,918	3,182	1,853	701	146	Diseases of the Kidneys.
2,782	2,231	1,460	805	202	40	Diseases of the Generative Organs.
867	713	453	248	94	13	Diseases of the Joints.
919	823	731	545	304	27	Diseases of the Skin.
2,951	269	—	—	—	—	CHILDBIRTH AND METRIA.
						VIOLENT DEATHS.
706	671	445	191	59	13	Suicide.
3,290	2,995	2,543	2,103	1,478	345	Other Violent Deaths.
91,649	90,602	89,090	85,552	66,651	27,276	OTHER CAUSES.

Table 24.—Outline LIFE TABLE of the HEALTHY DISTRICTS of ENGLAND AND WALES.

Age x	l_x			d_x		
	Persons.	Males.	Females.	Persons.	Males.	Females.
0	1,000,000	511,249	488,751	175,410	95,040	80,370
5	824,590	416,209	408,381	29,341	14,522	14,819
10	795,249	401,687	393,562	16,677	7,470	9,207
15	778,572	394,217	384,355	22,571	10,341	12,230
20	756,001	383,876	372,125	28,449	13,809	14,640
25	727,552	370,067	357,485	59,612	29,071	30,541
35	667,940	340,996	326,944	61,921	30,679	31,242
45	606,019	310,317	295,702	71,938	37,919	34,019
55	534,081	272,398	261,683	109,482	57,982	51,500
65	424,599	214,416	210,183	177,391	92,629	84,762
75	247,208	121,787	125,421	177,252	88,991	88,261
85	69,956	32,796	37,160	65,496	30,856	34,640
95	4,460	1,940	2,520	4,440	1,930	2,510
105	20	10	10	20	10	10

Note.—This Life Table is derived from the Healthy Districts Life Table constructed by Dr. Farr and published in 1859 in the "Transactions of the Royal Society," pp. 837–878; the number of children born, and dying at various ages, has been raised to 1,000,000 to render the Table comparable with those of All England, of London, and of Liverpool.

TABLE 25.—Outline LIFE TABLE for LIVERPOOL DISTRICT.

Age x	l_x			d_x		
	Persons.	Males.	Females.	Persons.	Males.	Females.
0	1,000,000	512,044	487,956	460,370	240,775	219,595
5	539,630	271,269	268,361	41,009	21,444	19,565
10	498,621	249,825	248,796	15,729	8,207	7,522
15	482,892	241,618	241,274	20,124	11,151	8,973
20	462,768	230,467	232,301	28,271	15,817	12,454
25	434,497	214,650	219,847	74,153	38,876	35,277
35	360,344	175,774	184,570	85,151	45,651	39,500
45	275,193	130,123	145,070	90,969	46,090	44,879
55	184,224	84,033	100,191	86,589	42,710	43,879
65	97,635	41,323	56,312	63,480	28,792	34,688
75	34,155	12,531	21,624	28,152	10,757	17,395
85	6,003	1,774	4,229	5,586	1,684	3,902
95	417	90	327	408	89	319
105	9	1	8	9	1	8

The Table may be read thus:—According to the rates of mortality prevailing in the 10 years 1861-70, of a *million* children born alive, 512,044 males, 487,956 females, 462,768 attain the age of 20; 28,271 die in the following 5 years; and 434,497 survive to the age of 25.

Table 26.—Table of Mortality, derived from the preceding **Liverpool Life Table,**

expected

AGES - - -	All Ages.	0— (*See* Table 29.)	5—	10—	15—	20—
Deaths from all Causes - -	1,000,000	460,370	41,009	15,729	20,124	28,271
Total Zymotic Diseases—Order 1.*	284,983	171,009	22,032	6,162	5,699	6,821
Zymotic Diseases—Order 1.*						
Small-pox - - - - - - -	8,141	5,175	901	262	287	583
Measles - - - - - - -	26,973	25,514	1,272	71	30	34
Scarlatina - - - - - - -	38,302	26,818	9,360	1,403	218	184
Diphtheria - - - - - - -	4,416	3,395	549	81	100	61
Whooping-cough - - -	34,021	32,551	1,410	50	10	—
Typhus - - - - - - -	76,563	9,297	4,907	2,884	4,162	4,724
Diarrhœa and Dysentery - - -	61,446	51,911	960	263	129	273
Cholera - - - - - - -	16,489	4,255	1,694	936	436	655
Other Zymotic Diseases—Order 1.* -	18,632	12,093	979	212	327	307
Five Constitutional Diseases.						
Cancer - - - - - - -	9,992	62	40	10	100	52
Scrofula and Tabes - - - -	15,658	11,694	1,537	644	476	350
Phthisis - - - - - - -	96,676	5,116	2,428	2,732	7,027	10,914
Hydrocephalus - - - - -	16,356	14,972	1,126	191	30	—
Local Diseases.						
Diseases of the Brain - - -	82,251	40,840	2,154	826	823	998
Diseases of the Heart, and Dropsy -	41,947	2,088	1,478	1,079	1,050	1,372
Diseases of the Lungs - - -	190,066	79,893	3,790	908	1,130	2,230
Diseases of the Stomach and Liver -	27,818	4,874	577	423	565	821
Diseases of the Kidneys - - -	9,744	630	362	182	237	468
Diseases of the Generative Organs -	1,502	21	—	—	10	85
Diseases of the Joints - - -	3,552	617	598	463	376	238
Diseases of the Skin - - - -	2,325	717	108	50	120	115
Childbirth and Metria - -	4,127	—	—	—	187	702
Violent Deaths.						
Suicide - - - - - - -	2,009	—	—	20	79	124
Other Violent Deaths - - -	45,184	17,107	2,644	1,434	1,680	2,217
Other Causes - - - - -	165,810	101,780	2,135	605	535	764

showing of what Diseases and at what Ages 1,000,000 LIVEBORN CHILDREN may be to die.

25—	35—	45—	55—	65—	75—	85 and upwards.	AGES.
74,153	85,151	90,969	86,589	63,480	28,152	6,003	DEATHS FROM ALL CAUSES.
15,287	19,066	17,064	12,737	6,726	2,041	289	TOTAL ZYMOTIC DIS.—Order 1.
							ZYMOTIC DISEASES—Order 1.
507	319	85	10	12	—	—	Small-pox.
32	—	—	—	—	—	—	Measles.
234	66	19	—	—	—	—	Scarlatina.
70	27	55	12	53	13	—	Diphtheria.
—	—	—	—	—	—	—	Whooping-cough.
10,657	14,322	12,504	8,635	3,681	760	30	Typhus.
882	1,200	1,421	1,903	1,550	766	188	Diarrhœa and Dysentery.
2,178	2,301	1,985	1,186	627	192	44	Cholera.
757	831	995	991	803	310	27	Other Zymotic Dis.—Order 1.
							FIVE CONSTITUTIONAL DIS.
702	1,792	2,876	2,589	1,437	317	15	Cancer.
349	183	197	153	62	13	—	Scrofula and Tabes.
26,946	21,529	13,274	5,617	1,757	230	15	Phthisis.
17	—	—	20	—	—	—	Hydrocephalus.
							LOCAL DISEASES.
3,126	3,703	5,789	6,757	5,873	1,996	366	Diseases of the Brain.
5,616	7,100	8,020	7,855	5,312	1,535	92	Diseases of the Heart, & Dropsy.
8,287	13,967	24,417	29,218	19,037	6,221	988	Diseases of the Lungs.
2,345	4,316	5,531	4,508	2,545	774	39	Diseases of the Stomach & Liver.
1,370	1,641	1,663	1,594	1,167	364	36	Diseases of the Kidneys.
258	430	400	193	78	27	—	Diseases of the Generat. Organs.
436	236	210	291	75	12	—	Diseases of the Joints.
254	165	271	309	149	40	27	Diseases of the Skin.
1,988	1,227	73	—	—	—	—	CHILDBIRTH AND METRIA.
							VIOLENT DEATHS.
338	591	420	278	139	25	—	Suicide.
4,359	4,696	4,314	3,719	1,810	708	95	Other Violent Deaths.
3,999	4,606	6,420	10,751	17,313	13,849	4,041	OTHER CAUSES.

TABLE **27.—Table of Mortality,** derived from the preceding LIVERPOOL LIFE TABLE, **expected**

AGES - - -	ALL AGES.	0— (*See* Table 30.)	5—	10—	15—	20—
DEATHS FROM ALL CAUSES - -	512,044	240,775	21,444	8,207	11,151	15,817
TOTAL ZYMOTIC DISEASES—Order 1.	143,072	85,468	11,269	2,949	2,927	3,826
ZYMOTIC DISEASES—Order 1.						
Small-pox - - - - - - -	4,458	2,615	518	120	139	405
Measles - - - - - - -	13,754	12,984	713	20	10	9
Scarlatina - - - - - - -	20,132	14,184	5,062	610	60	106
Diphtheria - - - - - - -	2,315	1,827	235	40	70	36
Whooping-cough - - - - -	14,710	14,084	596	30	—	—
Typhus - - - - - - -	38,493	4,456	2,307	1,369	2,170	2,566
Diarrhœa and Dysentery - - -	31,645	26,821	489	110	90	171
Cholera - - - - - - -	7,805	2,195	801	580	219	342
Other Zymotic Diseases—Order 1. -	9,760	6,302	528	70	169	189
FIVE CONSTITUTIONAL DISEASES.						
Cancer - - - - - - - -	2,929	21	20	—	70	18
Scrofula and Tabes - - - -	8,407	6,020	938	380	279	198
Phthisis - - - - - - -	50,295	2,636	1,280	1,289	3,694	5,753
Hydrocephalus - - - - -	9,577	8,761	626	140	30	—
LOCAL DISEASES.						
Diseases of the Brain - - -	43,602	27,397	1,202	430	438	558
Diseases of the Heart, and Dropsy -	20,392	1,072	850	520	537	729
Diseases of the Lungs - - -	95,501	42,356	1,877	410	657	1,350
Diseases of the Stomach and Liver -	13,674	2,864	332	240	319	423
Diseases of the Kidneys - - -	6,325	442	244	80	129	189
Diseases of the Generative Organs -	77	—	—	—	—	—
Diseases of the Joints - - -	2,099	326	362	290	189	162
Diseases of the Skin - - - -	1,238	325	29	20	90	81
CHILDBIRTH AND METRIA - -	—	—	—	—	—	—
VIOLENT DEATHS.						
Suicide - - - - - - -	1,564	—	—	10	30	99
Other Violent Deaths - - -	30,413	8,964	1,359	1,119	1,503	1,963
OTHER CAUSES - - - - -	82,879	54,133	1,056	330	259	468

showing of what **Diseases** and at what **Ages** 512,044 **Boys** BORN ALIVE **may be to die.**

25—	35—	45—	55—	65—	75—	85 and upwards.	• • • AGES.
38,876	45,651	46,090	42,710	28,792	10,757	1,774	DEATHS FROM ALL CAUSES.
7,821	9,852	8,557	6,159	3,275	873	96	TOTAL ZYMOTIC DIS.—Order 1.
							ZYMOTIC DISEASES—Order 1.
378	207	54	10	12	—	—	Small-pox.
18	—	—	—	—	—	—	Measles.
79	—	9	—	—	—	—	Scarlatina.
44	18	45	—	—	—	—	Diphtheria.
—	—	—	—	—	—	—	Whooping-cough.
5,325	7,448	6,219	4,173	1,916	344	—	Typhus.
571	648	725	932	720	283	84	Diarrhœa and Dysentery.
792	1,018	968	527	252	111	—	Cholera.
413	513	517	517	395	135	12	Other Zymotic Dis.—Order 1.
							FIVE CONSTITUTIONAL DIS.
155	378	798	901	476	62	—	Cancer.
246	117	145	61	23	—	—	Scrofula and Tabes.
12,915	11,032	7,280	3,352	941	123	—	Phthisis.
—	—	—	20	—	—	—	Hydrocephalus.
							LOCAL DISEASES.
1,636	2,270	2,693	3,312	2,660	922	84	Diseases of the Brain.
2,874	3,963	3,781	3,312	2,230	676	48	Diseases of the Heart, & Dropsy.
4,695	7,178	11,723	14,260	8,304	2,557	335	Diseases of the Lungs.
1,255	2,143	2,674	2,046	1,057	197	24	Diseases of the Stomach & Liver.
836	1,117	1,070	1,074	825	283	36	Diseases of the Kidneys.
—	9	36	20	12	—	—	Diseases of the Generat. Organs.
255	189	127	152	85	12	—	Diseases of the Joints.
194	99	136	182	70	—	12	Diseases of the Skin.
—	—	—	—	—	—	—	CHILDBIRTH AND METRIA.
							VIOLENT DEATHS.
273	452	336	243	139	12	—	Suicide.
4,144	4,063	3,327	2,633	1,138	184	36	Other Violent Deaths.
1,347	2,819	3,618	4,983	7,607	4,856	1,103	OTHER CAUSES.

TABLE 28.—**Table of Mortality,** derived from the preceding LIVERPOOL LIFE TABLE, **expected**

AGES	ALL AGES.	0— (*See* Table 30.)	5—	10—	15—	20—
DEATHS FROM ALL CAUSES	487,956	219,595	19,565	7,522	8,973	12,454
TOTAL ZYMOTIC DISEASES—Order 1.	141,911	85,541	10,763	3,213	2,772	2,995
ZYMOTIC DISEASES—Order 1.						
Small-pox	3,683	2,560	383	142	146	178
Measles	13,219	12,530	559	51	20	25
Scarlatina	18,170	12,634	4,278	793	158	76
Diphtheria	2,101	1,568	314	41	30	25
Whooping-cough	19,311	18,467	814	20	10	—
Typhus	38,070	4,841	2,600	1,515	1,992	2,158
Diarrhœa and Dysentery	29,801	25,090	471	153	39	102
Cholera	8,684	2,060	893	356	217	313
Other Zymotic Diseases—Order 1.	8,872	5,791	451	142	158	118
FIVE CONSTITUTIONAL DISEASES.						
Cancer	7,063	41	20	10	30	34
Scrofula and Tabes	7,251	5,674	599	264	197	153
Phthisis	46,381	2,480	1,148	1,443	3,333	5,161
Hydrocephalus	6,779	6,211	500	51	—	—
LOCAL DISEASES.						
Diseases of the Brain	38,649	22,443	952	396	385	440
Diseases of the Heart, and Dropsy	21,555	966	628	559	513	643
Diseases of the Lungs	94,565	37,537	1,913	498	473	880
Diseases of the Stomach and Liver	14,144	2,010	245	183	246	398
Diseases of the Kidneys	3,419	188	118	102	106	279
Diseases of the Generative Organs	1,425	21	—	—	10	85
Diseases of the Joints	1,453	291	236	173	187	76
Diseases of the Skin	1,087	392	79	30	30	34
CHILDBIRTH AND METRIA	4,127	—	—	—	187	702
VIOLENT DEATHS.						
Suicide	445	—	—	10	49	25
Other Violent Deaths	14,771	8,153	1,285	315	177	254
OTHER CAUSES	82,931	47,647	1,079	275	276	296

owing of what Diseases and at what Ages 487,956 Girls BORN ALIVE may be to die.

25—	35—	45—	55—	65—	75—	85 and upwards.	AGES.
8,277	30,500	44,879	43,879	34,688	17,395	4,229	DEATHS FROM ALL CAUSES.
7,536	9,214	8,507	6,578	3,451	1,168	193	TOTAL ZYMOTIC DIS.—Order 1.
							ZYMOTIC DISEASES—Order 1.
129	112	31	—	—	—	—	Small-pox.
24	—	—	—	—	—	—	Measles.
135	66	10	—	—	—	—	Scarlatina.
26	9	10	12	53	13	—	Diphtheria.
—	—	—	—	—	—	—	Whooping-cough.
5,132	6,874	6,285	4,462	1,765	416	30	Typhus.
310	552	696	971	830	483	104	Diarrhœa and Dysentery.
1,396	1,283	997	659	395	81	44	Cholera.
344	318	478	474	408	175	15	Other Zymotic Dis.—Order 1.
							FIVE CONSTITUTIONAL DIS.
517	1,414	2,078	1,683	961	255	15	Cancer.
196	66	52	92	39	13	—	Scrofula and Tabes.
13,121	10,488	5,994	2,265	816	107	15	Phthisis.
17	—	—	—	—	—	—	Hydrocephalus.
							LOCAL DISEASES.
1,499	1,433	3,096	3,445	3,213	1,074	282	Diseases of the Brain.
2,342	3,137	4,239	4,543	3,062	859	44	Diseases of the Heart, & Dropsy.
3,772	6,789	12,695	14,958	10,733	3,664	653	Diseases of the Lungs.
1,490	2,173	2,857	2,462	1,488	577	15	Diseases of the Stomach & Liver.
584	824	623	520	342	81	—	Diseases of the Kidneys.
328	461	364	173	66	27	—	Diseases of the Generat. Organs.
121	47	83	139	40	—	—	Diseases of the Joints.
99	66	135	127	79	49	15	Diseases of the Skin.
1,322	1,227	73	—	—	—	—	CHILDBIRTH AND METRIA.
							VIOLENT DEATHS.
99	159	94	35	—	13	—	Suicide.
706	553	967	1,066	672	524	59	Other Violent Deaths.
1,162	1,789	3,002	5,768	9,706	8,993	2,933	OTHER CAUSES.

Table 29.—Table showing out of 1,000,000 Liveborn Children what Numbers die of the different Diseases in the first Five Years of Life.

(This Table is a development of Column 2. of Table 26. It shows the deaths at *each year* of age under 5.)

CHILDREN OF BOTH SEXES.						
AGES - - - -	Total under 5 Years.	0—	1—	2—	3—	4—5
Deaths from all Causes - -	460,370	233,694	114,655	55,626	33,803	22,592
Total Zymotic Diseases—Order 1.	171,009	58,717	51,520	28,218	19,563	12,991
Zymotic Diseases—Order 1.						
Small-pox - - - - - - -	5,175	2,028	1,134	875	652	486
Measles - - - - - - -	25,514	5,121	10,156	5,553	3,041	1,643
Scarlatina - - - - - - -	26,818	2,588	6,202	6,459	6,727	4,842
Diphtheria - - - - - - -	3,395	697	1,145	685	568	300
Whooping-cough - - - -	32,551	11,163	10,854	5,627	3,101	1,806
Typhus - - - - - - -	9,297	1,494	1,998	2,012	1,800	1,993
Diarrhœa and Dysentery - - -	51,911	31,379	15,420	3,351	1,337	424
Cholera - - - - - - -	4,255	1,433	875	843	568	536
Other Zymotic Diseases—Order 1. -	12,093	2,814	3,736	2,813	1,769	961
Five Constitutional Diseases.						
Cancer - - - - - - -	62	—	—	10	32	20
Scrofula and Tabes - - - -	11,694	4,348	3,965	1,728	936	722
Phthisis - - - - - - -	5,116	1,102	1,623	1,138	705	548
Hydrocephalus - - - - -	14,972	6,262	4,707	2,244	1,064	695
Local Diseases.						
Diseases of the Brain - - -	49,840	34,921	7,931	3,625	2,052	1,311
Diseases of the Heart, and Dropsy -	2,068	292	521	400	463	392
Diseases of the Lungs - - -	79,893	38,652	23,986	9,947	4,556	2,772
Diseases of the Stomach and Liver -	4,874	3,395	718	252	263	246
Diseases of the Kidneys - - -	630	104	104	127	201	94
Diseases of the Generative Organs -	21	—	10	11	—	—
Diseases of the Joints - - -	617	125	94	106	147	145
Diseases of the Skin - - - -	717	393	198	64	42	20
Childbirth and Metria - -	—	—	—	—	—	—
Violent Deaths.						
Suicide - - - - - - -	—	—	—	—	—	—
Other Violent Deaths - - -	17,107	11,238	1,749	1,697	1,338	1,085
Other Causes - - - -	101,780	74,152	17,549	6,059	2,441	1,579

[illegible] 30.—Table showing out of 512,044 MALE CHILDREN, and of 487,956 FEMALE CHILDREN, BORN ALIVE, **the Numbers of Male and Female Children** respectively who d[illegible] **first Five Years of Life.**

(This Table is a development of Column 2. of Tab[illegible]

SEX	MALES.						
AGES	Total under 5 years.	0—	1—	2—	3—	4—5	Tota[illegible] unde[illegible] 5 yea[illegible]
DEATHS FROM ALL CAUSES	240,775	127,542	57,828	27,555	16,564	[illegible]	219,59[illegible]
TOTAL ZYMOTIC DISEASES—Order 1.	85,468	30,190	25,445	13,772	[illegible]	6,457	85,54[illegible]
ZYMOTIC DISEASES—Order 1.							
Small-pox	2,615	1,154	583	390	296	252	2,56[illegible]
Measles	12,984	2,726	5,210	2,719	1,512	817	12,53[illegible]
Scarlatina	14,184	1,437	3,243	3,330	3,554	2,620	12,63[illegible]
Diphtheria	1,827	419	607	358	296	147	1,56[illegible]
Whooping-cough	14,084	5,149	4,656	2,308	1,195	[illegible]	[illegible]
Typhus	4,456	661	1,036	969	857	933	4,84[illegible]
Diarrhœa and Dysentery	26,831	16,463	7,753	1,686	709	210	25,09[illegible]
Cholera	2,195	734	471	405	275	220	2,06[illegible]
Other Zymotic Diseases—Order 1.	6,302	1,447	1,948	1,517	910	482	5,70[illegible]
FIVE CONSTITUTIONAL DISEASES.							
Cancer	21	—	—	—	21	—	4[illegible]
Scrofula and Tabes	6,020	2,338	2,092	311	465	[illegible]	5,67[illegible]
Phthisis	2,636	650	795	601	317	273	2,48[illegible]
Hydrocephalus	8,761	3,754	2,710	1,254	603	440	6,21[illegible]
LOCAL DISEASES.							
Diseases of the Brain	27,397	19,871	4,154	1,844	931	597	22,44[illegible]
Dis. of Heart, & Dropsy	1,072	189	263	200	243	178	96[illegible]
Diseases of the Lungs	42,356	21,381	12,398	4,984	2,126	1,467	37,53[illegible]
Dis. of Stomach & Liver	2,354	2,108	356	147	127	[illegible]	2,01[illegible]
Diseases of the Kidneys	442	73	63	74	138	94	18[illegible]
Dis. of Generative Organs	—	—	—	—	—	—	2[illegible]
Diseases of the Joints	326	84	42	53	53	94	29[illegible]
Diseases of the Skin	325	157	115	32	11	10	39[illegible]
CHILDBIRTH & METRIA	—	—	—	—	—	—	—
VIOLENT DEATHS.							
Suicide	—	—	—	—	—	—	—
Other Violent Deaths	8,954	5,841	942	875	762	534	[illegible]
OTHER CAUSES	54,133	40,906	8,454	2,908	[illegible]	702	47,64[illegible]

TABLE 31.—**Outline LIFE TABLE for LONDON,** showing out of 1,000,000 LIVEBORN CHILDREN the **Numbers surviving** at the various AGES, and the **Numbers dying** in the INTERVALS of AGE.

AGE x	l_x			d_x		
	PERSONS.	Males.	Females.	PERSONS.	Males.	Females.
0	1,000,000	508,892	491,108	305,518	162,428	143,090
5	694,482	346,464	348,018	30,922	15,858	15,064
10	663,560	330,606	332,954	13,642	6,935	6,707
15	649,918	323,671	326,247	19,368	9,283	10,085
20	630,550	314,388	316,162	24,068	12,675	11,393
25	606,482	301,713	304,769	56,723	31,050	25,673
35	549,759	270,663	279,096	76,266	42,635	33,631
45	473,493	228,028	245,465	93,145	51,645	41,500
55	380,348	176,383	203,965	120,616	62,623	57,993
65	259,732	113,760	145,972	135,561	64,094	71,467
75	124,171	49,666	74,505	97,882	40,541	57,341
85	26,289	9,125	17,164	25,020	8,768	16,252
95	1,269	357	912	1,262	356	906
105	7	1	6	7	1	6

TABLE 32.—Outline LIFE TABLE for FIFTEEN GREAT TOWNS, showing out of 1,000,000 LIVEBORN CHILDREN the Numbers surviving at the various AGES, and the Numbers dying in the INTERVALS of AGE.

[NOTE.—This life table for fifteen great towns is based on facts relating to the following fifteen Registration Districts, viz., Manchester, Salford, Bradford, Birmingham, Sheffield, Leeds, Newcastle-upon-Tyne, Hunslet, Leicester, Gateshead, Bristol, Hull, Exeter, Worcester, and Shrewsbury.]

AGE x	l_x			d_x		
	PERSONS.	Males.	Females.	PERSONS.	Males.	Females.
0	1,000,000	509,337	490,663	345,816	183,774	162,042
5	654,184	325,563	328,621	32,411	16,806	15,605
10	621,773	308,757	313,016	15,894	8,120	7,774
15	605,879	300,637	305,242	21,536	10,905	10,631
20	584,343	289,732	294,611	25,497	13,040	12,457
25	558,846	276,692	282,154	58,697	29,787	28,910
35	500,149	246,905	253,244	73,154	39,059	34,095
45	426,995	207,846	219,149	88,376	47,861	40,515
55	338,619	159,985	178,634	114,244	59,179	55,065
65	224,375	100,806	123,569	125,440	59,830	65,610
75	98,935	40,976	57,959	81,357	34,787	46,570
85	17,578	6,189	11,389	16,849	6,008	10,841
95	729	181	548	724	180	544
105	5	1	4	5	1	4

TABLE 33.—Years of Life, and Deaths of Males from different

CAUSES OF DEATH.	ALL AGES.	AGES OF MALES.							
		Total under 1 Year.	1	2	3	4	Total under 5 Years.	5—	10—
Years of Life -	244,240,279	7,257,777	6,790,164	6,239,167	5,488,281	5,321,933	33,517,311	29,440,764	95,742,278
Total Deaths -	5,729,250	1,467,039	471,405	287,724	147,179	106,195	2,429,540	240,042	126,431
TOTAL ZYMOTIC DISEASES—Order 1. -	1,234,734	282,604	184,230	116,125	86,678	69,799	734,036	134,569	43,292
CLASS I.									
ORDER 1.									
1. Small-pox -	4,259	1,066	1,000	1,000	1,000	1,000	5,066	1,000	1,000
2. Measles -	11,669	1,000	1,000	1,000	1,000	1,000	5,000	1,000	1,000
3. Scarlatina -	11,669	1,000	1,000	1,000	1,000	1,000	5,000	1,000	1,000
4. Hooping-cough -	11,669	1,000	1,000	1,000	1,000	1,000	5,000	1,000	1,000
5. Diarrhœa -	11,669	1,000	1,000	1,000	1,000	1,000	5,000	1,000	1,000
6. Cholera -	11,669	1,000	1,000	1,000	1,000	1,000	5,000	1,000	1,000
7. Typhus -	11,669	1,000	1,000	1,000	1,000	1,000	5,000	1,000	1,000
8. Enteric -	11,669	1,000	1,000	1,000	1,000	1,000	5,000	1,000	1,000
9. Erysipelas -	11,669	1,000	1,000	1,000	1,000	1,000	5,000	1,000	1,000
25. Syphilis -	11,669	1,000	1,000	1,000	1,000	1,000	5,000	1,000	1,000
" Bilharzia -	11,669	1,000	1,000	1,000	1,000	1,000	5,000	1,000	1,000
" Hydrophobia -	11,669	1,000	1,000	1,000	1,000	1,000	5,000	1,000	1,000
" Glanders, from 1858 -	61	—	—	—	—	—	—	—	1
ORDER 3.									
25. Privation - - -	1120	48	21	15	6	4	94	27	23
" Want of Breast-milk -	13151	12996	151	4	—	—	13151	—	—
" Purpura and Scurvy -	4909	858	546	268	100	113	1944	340	234
" Alcoholism - {a Del. Trem.	10448	—	—	—	—	—	—	—	—
{b Intemp. -	6707	—	—	—	—	—	—	—	3
ORDER 4.									
25. Thrush - - - -	14572	13866	453	82	38	16	14467	16	5
" Worms, &c., from 1858 -	1134	128	147	212	137	113	736	213	45
CLASS II.									
ORDER 1.									
25. Gout - - - -	6029	—	—	—	—	—	—	1	2
15. Dropsy - - - -	24197	4176	1995	1454	1139	1008	9761	3196	1742
10. Cancer - - - -	53867	146	97	120	139	106	609	285	223
25. Cancrum Oris (Noma) -	1277	211	209	196	189	147	945	187	23
" Mortification - -	17505	671	172	80	47	30	1209	68	67
ORDER 2.									
11. Scrofula - - -	39440	5769	3335	1569	[illegible]	812	12428	3917	3946
" Tabes Mesenterica -	73479	33506	17961	6736	[illegible]	1737	62831	4833	2210
12. Phthisis - - -	618729	16538	11509	5913	5393	2817	40169	14485	16389
13. Hydrocephalus - -	107902	39861	23949	12156	6737	4839	91681	10958	2755
Multipliers - -	·004	·136	·147	·151	·135	[illegible]	·030	·034	·027

Note.—A supplementary Table of certain causes of death, included under the heads of this Table, will be found in
diseases or groups of diseases they are included

Menses in England and Wales, during the Twenty-five Years **1848–72.**

AGES OF MALES.										CAUSES OF DEATH.
15—	20—	25—	35—	45—	55—	65—	75—	85—	95 & upwards.	
9,137,268	21,501,788	35,524,345	27,699,922	21,252,121	14,025,582	7,472,852	2,668,379	325,447	12,127	**Years of Life.**
138,223	189,794	352,623	369,096	395,146	449,267	506,281	391,303	99,315	5,219	**Total Deaths.**
35,477	34,323	50,775	43,497	40,819	40,522	39,685	23,569	4,114	166	Total Zymotic Diseases—Order 1.
										CLASS I.
										Order 1.
3994	6254	7626	4050	2123	885	366	95	14	2	Small-pox.
226	153	157	96	43	18	6	2	2	—	Measles.
3229	1586	1560	782	401	180	77	36	3	—	Scarlatina, including Diphth. 1848 to 1859
830	471	519	357	280	241	153	52	6	—	Diphtheria from 1859
732	183	261	244	228	273	205	74	11	—	Quinsy.
25	9	12	8	5	2	4	3	—	—	Croup.
24	12	14	10	8	7	7	—	—	—	Whooping-cough.
19282	18461	24635	20299	17823	15391	11580	4252	455	10	Typhus.
830	672	1580	2156	2766	3208	3112	1841	314	11	Erysipelas.
—	—	—	—	—	—	—	—	—	—	Puerperal Fever (Metria).
57	44	135	337	661	999	970	514	94	4	Carbuncle.
191	215	385	573	909	1666	3157	2873	614	27	Influenza.
806	697	1445	1807	1469	1826	2174	1241	189	4	Dysentery.
857	913	1912	2372	3668	6394	10654	9789	2128	100	Diarrhœa.
1881	2763	6760	6985	6678	5514	3611	1378	146	6	Cholera.
91	120	220	231	231	239	203	84	11	—	Ague.
132	115	186	159	158	137	139	65	8	1	Remittent Fever.
2648	1733	3348	3518	3332	3528	3255	1265	116	1	Rheumatism.
12	12	20	13	16	14	12	5	3	—	Other *Zymotic* Diseases, from 1860.
										Order 2.
113	458	1077	758	434	234	92	24	1	—	Syphilis.
19	66	386	737	990	1054	1176	667	100	5	Stricture of Urethra.
3	25	48	33	17	15	6	2	—	—	Hydrophobia.
4	5	9	15	14	10	3	—	—	—	Glanders, from 1858.
										Order 3.
21	20	75	168	217	238	180	54	4	—	Privation.
—	—	—	—	—	—	—	—	—	—	Want of Breast-milk.
224	226	383	369	341	361	335	146	16	—	Purpura & Scurvy.
19	284	2429	3787	2477	1084	309	57	2	—	Alcoholism. *a* Del. Trem.
20	172	854	1475	1598	1029	434	81	2	—	Alcoholism. *b* Intemp.
										Order 4.
6	2	1	6	5	11	19	20	14	—	Thrush.
16	8	28	34	24	20	13	2	1	—	Worms, &c., from 1859
										CLASS II.
										Order 1.
5	13	84	483	1195	1771	1722	732	63	3	Gout.
1513	1230	2347	5407	8597	13978	20375	13130	1780	53	Dropsy.
425	579	2167	5266	10180	15053	13039	5377	687	25	Cancer.
13	4	8	10	24	22	22	16	4	—	Cancrum Oris (Noma)
168	98	233	466	906	2214	4831	5636	1588	66	Mortification.
										Order 2.
2857	2345	4381	2531	2003	1610	1068	253	25	2	Scrofula.
1886	653	602	400	573	313	160	18	1	—	Tabes Mesenterica.
54797	35121	144285	114174	80952	46820	17110	2282	140	5	Phthisis.
654	252	250	179	104	75	45	19	—	—	Hydrocephalus.
·961	·947	·926	·066	·047	·071	·134	·375	3·073	82·461	*Multipliers.*

the Annual Reports of the Registrar General. The Diseases in this Table are numbered so as to show under what in the Life Table series of Tables, Nos. 7 to 15.

TABLE 23. (*continued.*)—Years of Life, and Deaths of Males from different

CAUSES OF DEATH.	All Ages.	AGES OF MALES.							
		Total under 1 Year.	1	2	3	4	Total under 5 Years.	5—	10—
CLASS XII.									
ORDER 1.									
14. Cephalitis	23968	9825	6096	4006	2855	2685	35364	7220	3226
" Apoplexy	116165	4619	[illegible]	968	758	564	9014	1671	1069
" Paralysis	116263	195	141	151	141	110	638	372	342
" Insanity	6877	—	1	2	1	6	[illegible]	14	15
" Chorea	471	7	4	5	5	10	[illegible]	85	87
" Epilepsy	23670	383	449	346	290	270	[illegible]	1128	1427
" Convulsions	354170	228935	32811	12084	5718	3120	347668	4515	808
" *Brain Disease, &c.*	53969	4600	2166	1144	899	739	9548	2090	1945
ORDER 2.									
15. Pericarditis	7606	140	75	76	62	90	[illegible]	643	617
" Aneurism	7653	11	2	7	4	1	25	15	20
" *Heart Disease, &c.*	206966	1607	562	391	373	412	3345	3147	4239
ORDER 3.									
16. Laryngitis	18385	4662	3279	1663	[illegible]	1071	12041	1586	816
" Bronchitis	280622	87850	36213	12203	5791	3054	145111	4388	1197
" Pleurisy	13343	534	247	151	163	115	1200	427	334
" Pneumonia	323823	120293	56368	21036	9641	5663	[illegible]	2914	2207
" Asthma	28850	162	70	49	25	26	332	[illegible]	99
" *Lung Disease, &c.*	52585	9886	3097	1296	698	475	[illegible]	1270	714
ORDER 4.									
17.	8508	1088	326	196	151	126	1351	304	169
"	42348	14049	2203	[illegible]	748	684	19742	2303	1701
"	15610	1536	325	234	242	261	2598	1257	1271
"	6609	135	83	88	84	80	469	303	204
"	10571	896	305	140	75	68	[illegible]	258	234
"	10734	1038	110	33	13	23	1217	66	64
"	14762	2444	[illegible]	126	130	121	3009	[illegible]	373
"	3633	863	72	54	46	[illegible]	[illegible]	149	143
"	2970	76	11	5	6	7	105	14	28
"	1790	13	2	3	3	2	21	6	19
"	31034	4432	947	515	336	273	6403	749	371
"	167	3	2	—	2	1	8	3	—
"	17570	343	160	95	86	45	629	213	204
"	17461	6532	319	309	175	115	7750	256	[illegible]
"	61329	1349	243	190	115	121	2018	500	[illegible]
"	966	46	91	24	10	13	[illegible]	35	28
ORDER 5.									
18. Nephritis	5256	143	106	109	177	[illegible]	610	411	[illegible]
" Ischuria	2005	59	16	20	13	11	118	23	21
" Bright's Dis. (Nephria)	21004	64	176	168	176	[illegible]	764	630	467
" Diabetes	9165	16	[illegible]	22	15	13	[illegible]	133	283
" Calculus	4513	13	43	75	87	74	291	188	106
" Cystitis	6549	43	17	12	13	13	108	60	45
" *Kidney Disease, &c.*	41967	313	196	173	161	121	961	506	414
ORDER 6.									
19. Ovarian Dropsy	—	—	—	—	—	—	—	—	—
" *Uterus Disease, &c.*	1151	97	27	12	8	6	150	[illegible]	13
ORDER 7.									
20. Synovitis (Arthritis)	1172	25	18	14	20	25	102	[illegible]	102
" *Joint Disease, &c.*	10855	532	456	375	344	338	2089	2317	2420
ORDER 8.									
21. Phlegmon†	13435	2600	631	296	165	171	3863	[illegible]	903
" Ulcer	3069	697	135	47	17	16	902	[illegible]	42
" *Skin Disease, &c.*	4069	2460	[illegible]	121	51	34	3119	55	[illegible]
Multipliers	·001	·156	·147	·151	·155	·158	·650	·084	·067

* Including deaths from Worms (Class I., Order 4.) 1848-57.

Diseases in England and Wales, during the Twenty-five Years 1848–72.

CAUSES OF DEATH	AGES OF MALES. 15–	20–	25–	35–	45–	55–	65–	75–	85–	95 & upwards.
CLASS										
ORDER										
Cephalitis.	1889	1841	1808	3081	2331	1681	993	319	23	1
Apoplexy.	1552	2370	2357	9732	15896	23302	28128	17076	2386	64
Paralysis.	1152	764	1269	9420	12731	21857	36228	25332	3685	105
Insanity.	571	181	768	1296	1081	1242	1237	634	112	2
Chorea.	36	28	24	30	29	38	25	17	2	1
Epilepsy.	1241	2351	4706	4558	3750	2993	2558	1212	135	5
Convulsions.	124	1808	161	175	173	129	154	81	17	3
Brain Disease	965	1538	4741	7196	8564	10524	10332	4287	494	19
ORDER										
Pericarditis.	718	915	980	980	946	894	651	231	22	1
Aneurism.	7797	16393	2264	2264	1722	1133	536	165	14	—
Heart Disease	1712	1934	23078	23078	32130	45009	47497	20478	1793	41
ORDER										
Laryngitis.	12091	16190	915	915	943	808	443	143	19	—
Bronchitis.	1516	4273	16393	16393	31755	53276	66622	42616	7403	254
Pleurisy.	4036	5272	1934	1934	2049	2100	1527	599	63	—
Pneumonia.			16190	16190	18207	18385	15313	6774	940	40
Asthma.			4273	4273	9022	15099	18287	7918	750	20
Lung Disease			5272	5272	6695	7345	5898	2678	330	18
ORDER										
Gastritis.	536	826	826	826	1132	1416	1355	530	51	1
Enteritis.	2344	2282	2282	2282	2787	3267	3166	1324	137	1
Peritonitis.	1526	1401	1401	1401	1556	1576	1328	515	43	1
Ascites.	546	859	859	859	1039	1205	1099	473	60	1
Ulceration of	1004	1279	1279	1279	1668	1859	1490	440	35	—
Hernia.	608	772	772	772	1266	1933	2587	1532	222	5
Ileus.	869	1064	1064	1064	1476	2224	2644	1546	204	4
Intussuscept	240	286	286	286	311	434	418	166	17	—
Stricture of	121	216	216	216	525	814	795	264	23	—
Fistula.	168	228	228	228	343	443	367	106	7	—
Stomach Dis	1417	2571	2571	2571	4135	6030	6003	2245	236	7
Pancreas D	15	22	22	22	42	35	28	6	—	—
Hepatitis.	1752	2784	2784	2784	3637	3962	2834	745	39	—
Jaundice.	538	902	902	902	1356	1934	2466	1524	229	7
Liver Disease	4424	9685	9685	9685	14085	15240	10461	2672	189	2
Spleen Disea	117	135	135	135	158	155	82	14	3	1
ORDER										
Nephritis.	485	576	576	576	632	717	694	325	37	—
Ischuria.	96	167	167	167	239	313	513	393	62	2
Bright'sDise	2720	3860	3860	3860	4226	3692	2389	644	44	1
Diabetes.	1422	1462	1462	1462	1589	1652	1205	305	13	—
Calculus.	144	183	183	183	373	807	1407	784	75	2
Cystitis.	212	322	322	322	509	1176	2235	1511	199	8
Kidney Dise	2234	3281	3281	3281	4389	7195	12009	8426	1159	37
ORDER										
Ovarian Dro	207	—	—	152	175	174	201	83	17	—
Uterus Dise	57									
ORDER	30	—	—							
Synovitis (A	8	—	—	101	100	119	123	46	2	—
Joint Disea	3	43	89	1811	1745	1724	1243	451	38	2
ORDER										
Phlegmon.†	758	—	—	1007	1132	1261	1110	434	71	3
Ulcer.	139	17	106	188	362	568	890	658	116	4
Skin Disease	2191	67	2174	71	112	170	237	158	24	2
	652	1720	1060							
	38	623	118							
	33	61	55							
Multipliers	·051	45	·028	·036	·047	·071	·134	·375	3·073	82·461
		·047								

† Including deaths from "Abscess" during the 10 years 1848–57.

TABLE 23. (*continued.*)—**Years of Life, and Deaths of Males from different**

CAUSES OF DEATH.	ALL AGES.	AGES OF MALES.							
		Total under 1 Year.	1	2	3	4	Total under 5 Years.	5—	10—
CLASS IV.									
ORDER 1.									
25. Premature Birth	166476	166475	1	—	—	—	166476	—	—
" Cyanosis	5717	4927	198	104	60	63	5351	153	72
" Spina Bifida	3723	3533	100	30	10	7	3680	30	6
" Other Malformations	6185	5947	142	40	21	16	6066	49	24
" Teething	56027	28969	24569	2367	89	6	56019	8	—
ORDER 2.									
25. Parasuenia	—	—	—	—	—	—	—	—	—
22. Childbirth	—	—	—	—	—	—	—	—	—
ORDER 3.									
25. Old Age	294463	—	—	—	—	—	—	—	—
ORDER 4.									
25. Atrophy and Debility	303400	297358	29065	6396	3084	1799	250202	2831	1343
CLASS V.*									
ORDER 1. (ACCIDENT or NEGLIGENCE.)									
24. F	126182	737	1221	1254	1129	1191	5532	5993	19641
" G	6457	42	28	36	26	30	156	186	450
" C	1085	14	22	13	20	17	86	77	109
" B	34851	1293	4994	5072	4469	3468	19296	4453	1341
" P	4792	1035	232	195	136	100	1698	218	84
" D	53363	463	1606	1521	1241	1225	6356	6630	6617
" Su	19647	9099	547	197	122	81	10046	280	618
" O	21304	2149	124	136	113	114	2635	513	676
ORDER 3. (HOMICIDE.)									
24. Murder and Manslaughter, from 1858	3542	1268	45	24	21	15	1373	83	194
ORDER 4. (SUICIDE.)									
23. Gunshot Wounds (from 1858)	937	—	—	—	—	—	—	—	—
" Cut, Stab (from 1858)	3189	—	—	—	—	—	—	—	—
" Poison (from 1858)	1110	—	—	—	—	—	—	—	3
" Drowning (from 1858)	2064	—	—	—	—	—	—	—	11
" Hanging (from 1858)	6821	—	—	—	—	—	—	—	56
" Otherwise (from 1858)	1199	—	—	—	—	—	—	—	7
ORDER 5. (EXECUTION.)†									
24. Hanging, from 1858	167	—	—	—	—	—	—	—	—
24. Other Violent Deaths (not classed)	7478	1650	75	66	65	57	1913	379	414
25. Sudden Deaths (Cause unascertained)	48633	10633	1075	483	313	213	12717	704	401
25. Causes not specified or ill-defined	79140	38760	4443	2000	1215	814	47240	2347	1397
Multipliers	·004	·156	·147	·151	·155	·158	·030	·034	·037

* Previous to 1858, deaths from Violence were not classified under Orders 3, 4, 5, but were all included under the various headings of Order 1, regardless of their being due to Accident, Homicide, Suicide, or Execution.

Diseases in England and Wales, during the Twenty-five Years **1848–72.**

AGES OF MALES.										CAUSES OF DEATH.
15–	20–	25–	35–	45–	55–	65–	75–	85–	95 & upwards.	
										CLASS IV.
										ORDER 1.
—	—	—	—	—	—	—	—	—	—	Premature Birth.
66	33	13	8	9	9	2	1	—	—	Cyanosis.
4	1	2	—	—	—	—	—	—	—	Spina Bifida.
19	6	15	3	1	1	1	—	—	—	Other Malformatns.
—	—	—	—	—	—	—	—	—	—	Teething.
										ORDER 2.
—	—	—	—	—	—	—	—	—	—	Paramenia.
—	—	—	—	—	—	—	—	—	—	Childbirth.
										ORDER 3.
—	—	—	—	—	—	56212	167027	67093	4131	Old Age.
										ORDER 4.
701	660	1156	1835	3936	15971	23279	498	87	1	Atrophy and Debility.
										CLASS V.*
										ORDER 1. (ACCIDENT or NEGLIGENCE.)
10280	10724	19245	17719	15644	12363	7683	3537	789	41	Fractures & Contusions.
724	644	1120	1073	897	702	372	133	18	—	Gunshot Wounds.
96	92	150	125	140	119	66	24	2	—	Cut, Stab, from 1858.
1426	1348	2351	1735	1107	785	535	462	117	5	Burns and Scalds.
145	190	470	643	633	447	205	67	2	—	Poison.
5084	5204	7323	6221	4651	3243	1845	558	42	7	Drowning.
675	760	1433	1553	1755	1347	875	298	41	1	Suffocation.
710	642	1230	1252	1277	1185	789	349	46	1	Otherwise.
										ORDER 3. (HOMICIDE.)
157	288	523	423	294	178	78	34	7	—	Murder and Manslaughter, from 18
										ORDER 4. (SUICIDE.)
41	121	200	185	176	139	61	11	3	—	Gunshot Wounds, from 1858.
28	98	483	731	723	651	349	116	10	—	Cut, Stab - -
32	102	208	249	273	172	69	7	1	—	Poison - - -
64	149	363	376	445	397	224	49	6	—	Drowning - -
203	255	601	1128	1612	1800	927	220	19	—	Hanging - -
34	71	213	242	255	214	126	34	3	—	Otherwise - -
										ORDER 5. (EXECUTION.)†
12	42	61	31	6	4	1	-	—	—	Hanging, from 1858.
465	467	986	812	819	674	463	178	34	1	Other Violent Deaths (not classed).
669	1003	2363	4445	5628	7415	7863	4271	539	15	Sudden Deaths (Cause unascertained.)
1314	1379	2759	3302	4472	6187	5804	2484	429	26	Causes not specified or ill-defined.
·041	·047	·028	·036	·047	·071	·134	·375	3·073	82·461	*Multipliers.*

† According to the "Judicial Statistics," 101 *persons* were executed during the 10 years 1848–57; these deaths are included with Suffocation.

England and Wales.—Females:

TABLE 34.—Years of Life, and Deaths of Females from different

CAUSES OF DEATH.	ALL AGES.	AGES OF FEMALES.							
		Total under 1 Year.	1	2	3	4	Total under 5 Years.	5—	10—
Years of Life -	256,391,069	7,267,507	6,745,183	6,612,348	6,429,157	6,319,529	33,373,674	29,380,701	26,359,782
Total Deaths -	5,491,444	1,179,377	445,901	226,580	148,009	105,160	2,105,027	239,942	127,199
TOTAL ZYMOTIC DISEASES*—Order 1. -	1,242,495	247,424	186,031	121,596	89,362	66,089	711,002	139,846	50,531
CLASS I.									
ORDER 1.									
1. Small-pox - - -	62110	13513	6941	5591	4557	3660	34262	8590	2929
2. Measles - - - -	103289	17595	37287	20867	11376	6264	93389	7826	967
3. Scarlatina, including Diphtheria, 1848 to 1858	225868	13359	30844	36278	33871	27283	141635	60187	13937
4. Diphtheria, from 1859 -	31285	2308	3552	3484	3627	3349	16320	8602	3006
9. Quinsy - - - -	4099	462	436	314	310	258	1780	622	288
„ Croup - - - -	55721	6970	12838	12081	9642	6468	47999	7274	359
5. Whooping-cough - -	141853	54424	43009	20976	11182	5955	135546	5855	313
6. Typhus - - - -	227734	6113	9144	10237	9665	8803	43962	29610	21887
9. Erysipelas - - -	23480	7052	795	441	220	146	8654	404	399
22. Puerperal Fever (Metria) - - - - -	28439	—	—	—	—	—	—	—	1
9. Carbuncle - - -	1549	46	17	4	4	2	73	7	2
„ Influenza - - -	18296	2790	856	453	282	194	4575	384	203
7. Dysentery - - -	17338	3274	1687	654	355	279	6249	505	198
„ Diarrhœa - - -	212835	114796	35327	7647	2606	1396	161772	2726	948
8. Cholera - - - -	56001	4082	2407	1808	1546	1446	11379	4533	2145
9. Ague - - - -	1727	39	83	98	81	84	385	236	100
„ Remittent Fever - -	4872	333	551	565	422	323	2194	800	267
„ Rheumatism - - -	25837	30	28	36	68	154	316	1614	2570
„ Other *Zymotic* Diseases, from 1860 -	680	238	139	62	48	25	512	71	12
ORDER 2.									
25. Syphilis - - - -	14621	9589	742	177	55	27	10590	35	19
„ Stricture of Urethra† -	25	—	—	—	—	—	—	1	1
„ Hydrophobia - -	74	1	3	4	3	6	17	18	15
„ Glanders, from 1858 -	1	—	—	—	—	—	—	—	—
ORDER 3.									
25. Privation - - -	801	38	26	12	5	8	89	21	8
„ Want of Breast-milk -	11491	11316	170	5	—	—	11491	—	—
„ Purpura and Scurvy -	4100	687	512	244	138	109	1690	294	189
„ Alcoholism - {a Del. Trem.	1398	—	—	—	—	—	—	—	—
„ Alcoholism - {b Intemp. -	2568	—	—	—	—	—	—	—	1
ORDER 4.									
25. Thrush - - - -	13323	12320	602	120	57	24	13123	31	8
„ Worms, &c., from 1858 -	1320	80	201	259	188	112	840	279	58
CLASS II.									
ORDER 1.									
25. Gout - - - -	1438	—	—	—	—	—	—	1	—
15. Dropsy - - - -	117789	3576	1874	1151	887	770	8258	2336	1631
10. Cancer - - - -	123433	167	90	131	135	91	614	230	226
25. Cancrum Oris (Noma) -	2388	268	552	492	329	252	1893	327	30
„ Mortification - -	15038	862	316	158	95	79	1510	90	51
ORDER 2.									
11. Scrofula - - - -	31737	4798	3079	1423	972	746	11018	2779	2701
„ Tabes Mesenterica -	65416	27265	16269	6129	2516	1582	53761	4065	2301
12. Phthisis - - - -	674164	14586	11092	6043	3679	3184	38584	16260	38606
13. Hydrocephalus - -	79781	26406	20719	9567	5866	4150	66708	8893	2595
Multipliers - -	·004	·138	·148	·151	·156	·158	·030	·034	·038

Note—The diseases in this Table are numbered so as to show under what diseases or

* In comparing the total of Order 1. of Zymotic Diseases in this Table with the total of the same Order in the preceding Life Table the deaths from Puerperal Fever (Metria) should be deducted from the total given above.

Males in **England and Wales**, during the Twenty-five Years **1848-72.**

AGES OF FEMALES.										CAUSES OF DEATH.
15—	20—	25—	35—	45—	55—	65—	75—	85—	95 & upwards.	
24,653,427	23,068,226	39,242,812	30,205,378	22,257,094	14,825,680	9,142,730	3,375,687	502,704	25,174	**Years of Life.**
171,384	260,505	389,786	366,528	346,603	417,976	523,213	452,166	139,407	10,708	**Total Deaths.**
48,196	39,069	64,287	48,781	36,429	38,275	41,087	27,133	5,654	295	{TOTAL ZYMOTIC DISEASES*—Order
										CLASS I.
										ORDER 1.
335	3790	4850	2375	1127	554	211	66	11	—	Small-pox.
317	218	309	150	57	21	9	5	1	—	Measles.
370	2208	2418	1016	377	195	96	28	1	1	{Scarlatina, includ Diphth., 1848 to 1
1017	566	696	424	282	205	115	44	7	1	Diphtheria, from 1
135	147	237	202	185	189	181	71	9	3	Quinsy.
21	13	19	13	5	5	1	2	—	—	Croup.
47	16	21	11	9	8	3	3	1	—	Whooping-cough.
2369	18040	24829	19636	16221	14126	10625	4453	556	20	Typhus.
558	796	1670	1845	1988	2329	2598	1836	382	21	Erysipelas.
1495	6461	13169	7001	306	4	—	—	—	—	{Puerperal Fever (tria).
13	20	77	129	214	334	355	255	52	4	Carbuncle.
125	220	485	585	857	1930	4140	3793	888	43	Influenza.
289	434	1146	1168	1338	2001	2381	1426	215	13	Dysentery.
913	1389	3600	3660	3925	6761	12058	11793	3115	175	Diarrhœa.
1770	2846	7657	7638	6382	5628	4050	1729	235	11	Cholera.
88	84	161	153	131	140	150	92	12	—	Ague.
127	111	187	147	127	161	151	79	11	—	Remittent Fever.
2442	1701	2752	2630	2881	3678	3747	1446	157	3	Rheumatism.
5	10	14	3	15	8	17	12	1	—	{Other *Zymotic* eases, from 1860
										ORDER 2.
26	736	1427	830	437	188	61	10	2	—	Syphilis.
—	—	3	3	2	5	3	7	—	—	Stricture of Ureth
3	2	6	3	4	4	1	1	—	—	Hydrophobia.
—	—	1	—	—	—	—	—	—	—	Glanders, from 18
										ORDER 3.
12	27	80	127	140	136	118	44	5	—	Privation.
—	—	—	—	—	—	—	—	—	—	Want of Breast-m
151	187	263	264	296	302	286	123	23	2	Purpura and Scur
3	21	274	465	339	177	73	19	7	—	} Alco- {*a* Del. T
13	58	367	739	709	454	187	39	2	—	} holism. {*b* Intem
										ORDER 4.
6	10	20	21	15	16	34	30	8	1	Thrush.
10	10	37	26	28	18	17	2	—	1	Worms, &c., from 1
										CLASS II.
										ORDER 1.
—	4	23	103	200	399	456	225	25	2	Gout.
1750	2188	6821	9218	13918	21526	20913	18783	2747	100	Dropsy.
422	747	5929	18968	31408	31653	23109	8836	1241	50	Cancer.
11	11	18	17	21	20	23	12	5	—	Cancrum Oris (No
97	129	294	420	649	1514	3621	4732	1819	121	Mortification.
										ORDER 2.
2768	2184	3180	2329	1852	1575	1020	399	25	2	Scrofula.
1328	875	1129	648	505	374	173	25	1	1	Tabes Mesenteric
88151	98295	174299	120224	66201	34213	13028	2117	176	10	Phthisis.
732	246	253	139	87	66	47	15	—	—	Hydrocephalus.
·041	·043	·025	·033	·045	·067	·109	·296	1·939	39·724	*Multipliers.*

groups of diseases they are included in the Life Table series of Tables, Nos. 7 to 15.

† All the 25 deaths from Stricture of Urethra were recorded during the seven years 1848-54; such cases have sinc been included with "Uterus Disease, &c.," Class III., Order 6.

TABLE 34.—Years of Life, and Deaths of Females from different

CAUSES OF DEATH.	ALL AGES.	AGES OF FEMALES.							
		Total under 1 Year.	1	2	3	4	Total under 5 Years.	5—	10—
Years of Life -	256,391,669	7,267,507	6,745,185	6,612,348	6,489,157	6,519,529	33,573,674	29,390,701	26,359,782
Total Deaths -	5,491,444	1,170,377	445,961	286,590	146,009	106,100	2,105,027	220,948	127,199
TOTAL ZYMOTIC DISEASES*—Order 1. -	1,348,495	347,484	188,031	131,696	89,262	66,029	711,062	139,846	59,531
CLASS I.									
ORDER 1.									
	62110	13513	6941	5391	4557	3660	34062	3690	2289
	103269	17396	37297	20667	11376	6264	93389	7926	967
	236668	13550	30644	36278	33871	37285	141635	[illegible]	13967
	31285	2308	3562	[illegible]	3627	3549	16320	3602	3006
	4099	461	496	314	310	228	1780	652	295
	55721	6970	12338	12061	9642	6468	47909	7274	359
	141853	54424	42069	20976	11182	5965	135546	5855	313
	227754	6113	9144	10237	9665	8903	43962	29610	21587
	23480	7602	795	441	229	146	8654	404	399
	28459	—	—	—	—	—	—	—	1
	1549	46	17	4	4	2	73	7	2
	16326	2790	856	453	262	194	4575	384	393
	17858	3274	1687	654	385	279	6349	505	126
	212835	114796	35337	7647	2806	1396	161772	2726	946
	56001	4062	2497	1308	1546	1446	11379	4533	2145
	1727	39	83	98	61	84	385	836	100
	4573	833	551	566	423	823	2194	600	397
	95657	30	25	36	69	154	316	1614	2570
	680	226	139	62	48	25	512	71	12
ORDER 2.									
25. Syphilis - - - -	14621	9589	742	177	55	27	10590	35	19
„ Stricture of Urethra† -	26	—	—	—	—	—	—	1	1
„ Hydrophobia - -	74	1	3	4	3	6	17	18	15
„ Glanders, from 1858 -	1	—	—	—	—	—	—	—	—
ORDER 3.									
25. Privation - - -	801	38	26	13	5	8	89	21	8
„ Want of Breast-milk -	11491	11318	170	6	—	—	11491	—	—
„ Purpura and Scurvy -	4109	687	512	244	158	109	1690	394	129
„ Alcoholism - { a Del. Trem.	1398	—	—	—	—	—	—	—	—
„ Alcoholism - { b Intemp. -	2566	—	—	—	—	—	—	—	1
ORDER 4.									
26. Thrush - - - -	13323	12320	602	120	67	24	13123	31	3
„ Worms, &c., from 1866 -	1330	89	201	269	168	112	849	279	[illegible]
CLASS II.									
ORDER 1.									
26. Gout - - - -	1433	—	—	—	—	—	—	1	—
15. Dropsy - - - -	117789	3676	[illegible]	1151	867	770	6283	2256	1651
10. Cancer - - - -	125483	167	90	151	135	91	634	239	226
25. Cancrum Oris (Noma) -	2353	266	584	406	329	252	[illegible]	327	30
„ Mortification - -	15466	862	316	158	96	79	1510	90	51
ORDER 2.									
11. Scrofula - - - -	31787	4796	3079	1483	972	746	11018	2779	3701
„ Tabes Mesenterica -	69416	27365	16269	6139	3516	1582	53761	4085	2301
12. Phthisis - - - -	674164	14396	11091	6945	5879	5154	38584	16299	36966
13. Hydrocephalus - -	79781	26406	20719	9667	5968	4156	66706	9965	2695
Multipliers - -	·094	·128	·146	·151	·156	·153	·080	·084	·085

Note—The diseases in this Table are numbered so as to show under what diseases or

* In comparing the total of Order 1. of Zymotic Diseases in this Table with the total of the same Order in the preceding Life Table the deaths from Puerperal Fever (Metria) should be deducted from the total given above.

Diseases in England and Wales, during the Twenty-five Years **1848–72.**

	AGES OF FEMALES.									
	20—	25—	35—	45—	55—	65—	75—	85—	95 & upwards.	
[illegible]	23,063,226	30,242,812	30,206,378	22,257,094	14,825,680	9,142,730	3,375,387	502,704	25,174	
[illegible]	290,505	389,786	366,523	346,603	417,976	523,213	452,166	139,407	10,708	
[illegible]	39,069	64,267	48,781	36,429	38,275	41,087	27,133	5,654	295	
[illegible]	3730	4850	2375	1127	554	211	66	11	—	
[illegible]	218	309	150	57	21	9	5	1	—	
[illegible]	2208	2418	1016	377	195	95	28	1	1	
[illegible]			424	282	205	115	44	7	1	
[illegible]	566	696	202	185	189	181	71	9	3	
[illegible]	147	237	13	5	5	1	2	—	—	
[illegible]	13	19	11	9	8	3	3	1	—	
[illegible]	16	21	19636	16221	14126	10625	4453	556	20	
[illegible]	18040	24829	1845	1968	2339	2598	1836	382	21	
[illegible]	796	1670	7001	308	4	—	—	—	—	
[illegible]	6461	13169								
[illegible]			120	214	334	355	255	52	4	
[illegible]	29	77	585	857	1930	4140	3793	888	43	
[illegible]	220	485	1163	1338	2001	2381	1426	215	13	
[illegible]	434	1146	3660	3925	6761	12058	11793	3115	175	
[illegible]	1389	3600	7638	6382	5626	4050	1729	235	11	
[illegible]	2846	7657	153	131	140	150	92	12	—	
[illegible]	84	161	147	127	161	151	79	11	—	
[illegible]	111	187	2630	2881	3678	3747	1446	157	3	
[illegible]	1701	2753	3	15	8	17	12	1	—	
[illegible]	10	14								
[illegible]			830	457	188	61	10	2	—	
[illegible]	736	1427	3	2	5	3	7	—	—	
[illegible]	2	1	3	4	4	1	1	—	—	
			—	—	—	—	—	—	—	
			127	140	136	118	44	5	—	
		80	—	—	—	—	—	—	—	
	27		263	296	302	286	123	23	2	
	187		274	485	339	177	73	19	7	—
	21		367	739	709	454	187	39	2	—
	58									
	181									
		20		21	15	16	34	30	8	1
	10	37		26	28	18	17	2	—	1
	10									
			23	103	200	399	456	225	25	2
	4		6821	9218	13918	21526	20913	18783	2747	100
	2186		5929	13968	31408	31653	23109	8836	1241	50
	747		18	17	21	20	23	12	5	—
	11		294	420	649	1514	3621	4732	1819	121
	120									
			3180	2329	1852	1575	1020	309	25	2
	2184		1139	648	505	374	173	25	1	1
	875		174299	120234	66201	34213	13028	2117	176	10
			253	139	87	66	47	15	—	—
	246									
	·045	·025	·033	·045	·067	·109	·296	1·969	39·724	

groups of diseases they are included in the Life Table series of Tables, Nos. 7 to 15.

† All the 25 deaths from Stricture of Urethra were recorded during the seven years 1848-54; such have been included with "Uterus Disease, &c.," Class III., Order 6.

TABLE 34. (*continued.*)—Years of Life, and Deaths of Females from different

CAUSES OF DEATH.	ALL AGES.	AGES OF FEMALES.							
		Total under 1 Year.	1	2	3	4	Total under 5 Years.	5—	10—
CLASS III.									
ORDER 1.									
14. Cephalitis	43327	6609	5469	3611	2920	2696	20616	6908	3306
„ Apoplexy	117311	2917	1292	822	697	622	6210	1848	963
„ Paralysis	118946	116	155	185	133	106	695	389	309
„ Insanity	7709	—	2	4	1	1	8	13	21
„ Chorea	1107	8	6	4	6	15	39	200	306
„ Epilepsy	26741	[illegible]	305	295	253	215	1604	976	1234
„ Convulsions	276554	217276	30487	11969	5883	3320	268934	4637	946
„ *Brain Diseases, &c.*	48789	3961	1762	1049	784	655	7902	2156	[illegible]
ORDER 2.									
15. Pericarditis	7154	97	54	72	74	69	366	687	799
„ Aneurism	2908	13	5	3	1	2	24	5	24
„ *Heart Disease, &c.*	218734	1227	[illegible]	357	349	307	2982	3249	5906
ORDER 3.									
16. Laryngitis	14823	2779	2386	1685	1471	1003	9303	1545	292
„ Bronchitis	368961	66896	34161	12670	5939	3530	122915	4656	1874
„ Pleurisy	9703	416	246	153	133	100	1039	376	306
„ Pneumonia	354978	89091	52197	20978	[illegible]	3923	177813	9065	3052
„ Asthma	49825	113	53	57	23	18	249	68	65
„ *Lung Disease, &c.*	42712	7796	2332	1243	713	443	12963	1317	963
ORDER 4.									
17. G	10451	899	354	189	146	[illegible]	1717	301	219
„ E	41339	9996	2723	1246	827	686	15477	2316	1447
„ P	23294	990	290	225	203	209	1917	[illegible]	1147
„ A	11171	101	[illegible]	60	54	46	341	216	163
„ U	11913	663	297	136	90	68	1263	298	243
„ H	10122	234	24	6	5	3	277	23	16
„ D	14199	1305	121	107	100	113	1746	349	257
„ In	3206	479	53	31	[illegible]	33	626	116	66
„ Bl	3744	26	2	1	6	—	45	11	11
„ F	761	2	2	1	2	2	10	1	7
„ Sc	33413	3305	856	856	307	316	5406	826	465
„ P	149	1	—	1	1	1	4	—	2
„ H	[illegible]	332	109	[illegible]	48	61	551	189	159
„ Ju	16023	3091	836	[illegible]	[illegible]	141	4606	225	86
„ L	54674	576	212	164	98	97	1437	306	336
„ Sk	874	34	46	25	8	10	121	17	16
ORDER 5.									
18. Nephritis	3135	90	125	111	89	81	[illegible]	230	110
„ Ischuria	755	25	5	3	6	10	54	13	6
„ Bright's Dis. (Nephria)	14630	98	197	111	135	106	573	426	306
„ Diabetes	4529	11	20	9	13	11	64	106	201
„ Calculus	524	2	2	2	3	2	11	23	11
„ Cystitis	1453	16	8	11	7	2	44	22	25
„ *Kidney Disease, &c.*	[illegible]	194	158	123	110	81	665	286	229
ORDER 6.									
19. Ovarian Dropsy	5659	—	—	—	—	—	—	—	8
„ *Uterus Disease, &c.*	21616	44	63	33	16	3	159	10	54
ORDER 7.									
20. Synovitis (Arthritis)	753	29	21	21	14	21	106	[illegible]	79
„ *Joint Disease, &c.*	19763	506	413	309	313	316	1856	1621	1678
ORDER 8.									
21. Phlegmon†	9690	2233	653	337	183	144	3690	434	303
„ Ulcer	5075	797	219	98	61	21	1190	49	27
„ *Skin Disease, &c.*	8413	1319	306	113	70	36	2246	51	24
Multipliers	·084	·125	[illegible]	·151	·156	·158	·080	·084	·093

* Including deaths from Worms (Class I., Order 6), 1848-57.

Diseases in England and Wales, during the Twenty-five Years **1848-72.**

AGES OF FEMALES.										CAUSES OF DEATH
15—	20—	25—	35—	45—	55—	65—	75—	85—	95 & upwards.	
										CLASS I.
										ORDER 1.
[illegible]	2053	2812	**2024**	1513	1051	675	236	36	—	Cephalitis.
[illegible]	2173	5249	**8531**	15858	24182	29569	18180	2993	109	Apoplexy.
[illegible]	684	3076	**6009**	11089	22492	39399	29925	5122	207	Paralysis.
[illegible]	253	764	**1100**	1391	1614	1559	833	136	8	Insanity.
[illegible]	98	51	**27**	30	32	36	25	2	—	Chorea.
[illegible]	2082	4901	**3988**	2895	2635	2251	1132	171	2	Epilepsy.
[illegible]	290	484	**318**	220	184	175	127	29	—	Convulsions.
1712	1766	3820	**4891**	6224	7430	7454	3613	508	20	*Brain Disease,*
										ORDER 2.
[illegible]	494	820	**837**	795	804	648	233	24	—	Pericarditis.
[illegible]	85	330	**493**	575	541	367	121	12	—	Aneurism.
[illegible]	6565	16683	**24045**	33000	47190	50641	21359	2011	47	*Heart Disease,*
										ORDER 3.
[illegible]	282	681	**628**	531	344	289	91	15	2	Laryngitis.
1730	2403	7824	**14485**	27779	52028	73236	40996	9942	471	Bronchitis.
[illegible]	561	1100	**1180**	1057	1354	1498	675	100	6	Pleurisy.
[illegible]	4283	8528	**8766**	8588	11262	12070	6598	1123	51	Pneumonia.
154	301	1373	**3141**	6138	11492	13823	6333	650	28	Asthma.
[illegible]	1616	3448	**3951**	4076	5018	5096	2611	430	14	*Lung Disease,*
										ORDER 4.
[illegible]	382	912	**1087**	1273	1652	1688	717	102	6	Gastritis.
[illegible]	1875	3460	**3215**	3074	3599	3474	1542	180	4	Enteritis.
[illegible]	2351	4276	**3255**	2009	1971	1699	716	59	3	Peritonitis.
[illegible]	289	884	**1386**	1939	2369	2228	1020	119	3	Ascites.
[illegible]	900	1749	**1673**	1546	1713	1385	462	39	1	Ulceration of Int
[illegible]	61	259	**896**	1755	2561	2782	1280	168	9	Hernia.
[illegible]	420	886	**1142**	1671	2421	2868	1760	292	7	Ileus.
[illegible]	111	241	**315**	411	460	515	208	31	—	Intussusception
[illegible]	62	275	**512**	711	883	819	357	36	1	Stricture of Int
[illegible]	35	130	**150**	147	115	107	39	1	—	Fistula.
[illegible]	809	2088	**2900**	4289	6243	6439	2931	392	10	*Stomach Disea*
[illegible]	6	13	**22**	36	25	29	6	—	—	*Pancreas Disea*
[illegible]	433	1439	**2523**	3440	4239	3296	1019	83	1	Hepatitis.
[illegible]	287	871	**1106**	1660	2445	2982	1891	331	13	Jaundice.
[illegible]	963	3720	**7469**	11423	13979	10848	3530	290	10	*Liver Disease,*
[illegible]	36	125	**124**	143	125	104	35	4	—	*Spleen Disease,*
										ORDER 5.
[illegible]	149	360	**361**	371	408	400	143	19	—	Nephritis.
[illegible]	22	73	**105**	116	142	147	57	10	1	Ischuria.
[illegible]	865	2209	**2581**	2415	2337	1631	516	54	1	Bright'sDis.(Ne
[illegible]	311	803	**808**	745	713	464	99	10	—	Diabetes.
[illegible]	11	38	**52**	64	115	125	58	7	—	Calculus.
[illegible]	69	140	**176**	174	241	303	184	41	2	Cystitis.
[illegible]	600	1565	**1857**	2052	2413	2268	1004	119	1	*Kidney Disease*
										ORDER 6.
[illegible]	214	852	**1241**	1412	1091	604	129	9	1	Ovarian Dropsy.
[illegible]	905	2899	**4712**	5149	3851	2417	761	75	2	*Uterus Disease,*
										ORDER 7.
[illegible]	38	42	**68**	76	98	88	39	8	—	Synovitis (Arthr
1596	1065	1786	**1663**	1514	1441	1110	397	44	—	*Joint Disease, &*
										ORDER 8.
[illegible]	490	1011	**879**	686	774	747	362	53	2	Phlegmon.†
[illegible]	67	165	**251**	461	779	1145	798	131	3	Ulcer.
[illegible]	41	89	**112**	144	186	210	138	32	2	*Skin Disease, &c*
·061	·043	·025	·033	·045	·067	·109	·296	1·989	39·724	*Multipliers.*

† Including deaths from "Abscess" during the 10 years 1848-57.

TABLE 24. (*continued.*)—**Years of Life, and Deaths of Females from different**

CAUSES OF DEATH.	ALL Ages.	AGES OF FEMALES. Total under 1 Year.	1	2	3	4	Total under 5 Years.	5—	10—
CLASS IV.									
ORDER 1.									
25. Premature Birth	129675	129671	4	—	—	—	129675	—	—
„ Cyanosis	4148	3495	122	95	69	49	3991	96	72
„ Spina Bifida	4639	4396	140	23	13	12	4584	27	6
„ Other Malformations	4099	3787	138	46	26	14	4007	51	21
„ Teething	47968	32549	23836	2454	105	13	47957	11	—
ORDER 2.									
25. Parasmenia	2271	—	—	—	—	—	—	—	99
22. Childbirth	55649	—	—	—	—	—	—	—	3
ORDER 3.									
25. Old Age	391170	—	—	—	—	—	—	—	—
ORDER 4.									
25. Atrophy and Debility	236734	172397	[illegible]	8416	5219	1819	214670	3765	1561
CLASS V.*									
ORDER 1. (ACCIDENT OR NEGLIGENCE.)									
24. F[illegible]ns	21861	622	997	969	631	532	3691	1515	875
„ G[illegible]	1172	36	17	20	14	9	96	50	62
„ C[illegible]	288	10	12	11	8	7	48	26	11
„ B[illegible]	33854	1264	3391	3744	3672	3077	15648	7027	1058
„ P[illegible]	3442	302	165	136	93	53	1251	151	51
„ D[illegible]	11169	494	1073	1034	516	312	3399	1056	675
„ S[illegible]	11243	8371	406	151	91	74	9093	145	57
„ O[illegible]	3901	1767	120	100	76	66	2129	170	114
ORDER 3. (HOMICIDE.)									
24. Murder and Manslaughter, from 1858	2378	1314	44	28	21	22	1429	67	33
ORDER 4. (SUICIDE.)									
23. Gunshot Wounds (from 1858)	13	—	—	—	—	—	—	—	—
„ Cut, Stab (from 1858)	896	—	—	—	—	—	—	—	4
„ Poison (from 1858)	900	—	—	—	—	—	—	—	7
„ Drowning (from 1858)	1616	—	—	—	—	—	—	1	52
„ Hanging (from 1858)	1665	—	—	—	—	—	—	—	5
„ Otherwise (from 1858)	483	—	—	—	—	—	—	—	3
ORDER 5. (EXECUTION.)†									
24. Hanging, from 1858	8	—	—	—	—	—	—	—	—
24. Other Violent Deaths (not classed)	2696	1208	57	47	41	35	1478	191	57
25. Sudden Deaths (Cause unascertained)	34057	9430	921	394	278	189	11212	[illegible]	406
25. Causes not specified or ill-defined	73439	31156	[illegible]	1952	1256	905	39623	2298	1339
Multipliers	·004	·138	·146	·151	·158	·155	·030	·034	·033

* Previous to 1858, deaths from Violence were not classified under the Orders 3, 4, 5, but were all included under the various headings of Order 1, regardless of their being due to Accident, Homicide, Suicide, or Execution.

Diseases in England and Wales, during the Twenty-five Years **1848-72.**

AGES OF FEMALES.										CAUSES OF DEATH.
15–	20–	25–	35–	45–	55–	65–	75–	85–	95 & upwards.	
										CLASS IV.
										ORDER 1.
—	—	—	—	—	—	—	—	—	—	Premature Birth.
34	20	13	5	6	8	3	—	—	—	Cyanosis.
2	2	3	1	2	1	—	1	—	—	Spina Bifida.
29	10	10	5	3	2	—	—	—	—	Other Malformations.
—	—	—	—	—	—	—	—	—	—	Teething.
										ORDER 2.
685	349	300	338	432	78	5	—	—	—	Paramenia.
2257	8805	23019	20341	1193	1	—	—	—	—	Childbirth.
										ORDER 3.
—	—	—	—	—	—	70868	213037	98394	8871	Old Age.
										ORDER 4.
948	919	2237	3124	5942	21538	30487	529	105	9	Atrophy and Debility.
										CLASS V.*
										ORDER 1. (ACCIDENT or NEGLIGENCE.)
628	465	1006	1323	1770	2303	3056	3812	1317	90	Fractures & Contusns.
54	89	166	171	199	144	101	29	9	—	Gunshot Wounds.
13	9	28	32	40	22	26	25	6	2	Cut, Stab, from 1858.
1003	579	870	778	860	956	1421	1649	546	39	Burns and Scalds.
243	252	334	367	332	222	158	69	10	2	Poison.
304	763	1092	920	929	688	440	194	18	1	Drowning.
188	119	240	327	424	367	283	113	21	1	Suffocation.
99	64	195	216	232	235	241	160	42	4	Otherwise.
										ORDER 3. (HOMICIDE.)
42	89	232	218	126	71	44	35	2	—	Murder and Manslaughter, from 1858.
										ORDER 4. (SUICIDE.)
2	2	2	2	2	2	—	—	—	—	Gunshot Wounds } from 1858.
12	49	160	172	213	158	88	30	4	—	Cut, Stab - - } from 1858.
109	119	177	194	173	78	37	5	1	—	Poison - - - } from 1858.
222	194	273	232	263	217	113	36	3	—	Drowning - - } from 1858.
52	72	180	290	443	352	209	58	4	—	Hanging - - } from 1858.
30	35	91	102	88	55	54	21	4	—	Otherwise - - } from 1858.
										ORDER 5. (EXECUTION.)†
—	—	4	3	—	—	1	—	—	—	Hanging, from 1858.
66	58	143	145	117	145	159	159	46	2	Other Violent Deaths (not classed).
886	717	1859	2614	3313	4389	4906	2912	485	16	Sudden Deaths (Cause unascertained).
1428	1596	3637	4206	4496	5992	5598	2549	607	38	Causes not specified or ill-defined.
·041	·043	·025	·033	·045	·067	·109	·296	1·989	39·724	*Multipliers.*

† According to the "Judicial Statistics," 101 *persons* were executed during the 10 years 1848-57; these deaths are included with Suffocation.

TABLE 35.—Reciprocals of Years of Life at each AGE multiplied by 1,000,000 and to be called "*Multipliers.*"

AGES.	MALES.	FEMALES.
ALL AGES	·004	·004
0—	·136	·138
1—	·147	·148
2—	·151	·151
3—	·155	·156
4—5	·158	·158
0—5	·030	·030
5—	·034	·034
10—	·037	·038
15—	·041	·041
20—	·047	·043
25—	·028	·025
35—	·036	·033
45—	·047	·045
55—	·071	·067
65—	·134	·109
75—	·375	·296
85—	3·073	1·989
95 & upwards	82·461	39·724

These *Multipliers* are obtained by dividing 1,000,000 by the years of life at each age; and to obtain the approximate rate of mortality per million at any age by any particular disease, it will suffice to employ these multipliers. Thus the males dying from Typhus at ages 25—35 are 24,635, which number multiplied by ·028 found in the Table above against age 25 gives a death-rate from that disease of 690 per million males, nearly equivalent to the rate (693) as obtained by dividing the deaths by the years of life and multiplying by a million. The appropriate *Multipliers* will be found at the foot of every column.

TABLE 36.—Reciprocals of Deaths from All Causes at each of EIGHTEEN GROUPS OF AGES multiplied by 100,000, and called "*Death Multipliers*," to obtain the PROPORTION of DEATHS by each DISEASE to 100,000 DEATHS at each GROUP OF AGES from ALL CAUSES.

AGES.	MALES.	FEMALES.
ALL AGES	·017	·018
0—	·067	·085
1—	·212	·224
2—	·439	·441
3—	·679	·676
4—5	·942	·951
0—5	·041	·048
5—	·402	·417
10—	·791	·786
15—	·640	·580
20—	·527	·499
25—	·284	·257
35—	·271	·273
45—	·253	·289
55—	·223	·239
65—	·198	·191
75—	·256	·221
85—	1·007	·717
95 & upwards	19·161	9·339

Thus the males dying from Phthisis at ages 25—35 are 144,285, which number multiplied by ·234 found in the Table above against age 25 gives a proportion of deaths from that disease of 40,977 to 100,000 deaths from All Causes at that age, nearly equivalent to the proportion (40,918) as obtained by dividing the deaths by Phthisis at age 25 by the deaths from All Causes at age 25 and multiplying by 100,000.

TABLE 37.—The **Districts** of **England and Wales** (including **London**) CLASSIFIED according to **Mortality.**

MEAN ANNUAL DEATH-RATES per 1000 Persons, 1861-70.	Number of Districts at each Rate of Mortality in Col. 1.	AREA in Acres.	MEAN POPULATION, 1861-71.	BIRTHS, 1861-70.	DEATHS, 1861-70.	EXCESS of BIRTHS over DEATHS, 1861-70.	INCREASE of ENUMERATED POPULATION, 1861-71.
ENGLAND & WALES	619	37,319,221	21,348,974*	7,500,096	4,767,567*	2,732,529	2,640,042
15	1	147,816	12,699	3,718	1,916	1,802	— 1,023
16	16	1,004,779	227,270	66,987	36,153	30,834	55,719
17	37	2,072,758	622,903	188,638	106,077	82,561	81,494
18	89	5,881,423	1,459,374	459,625	263,596	196,029	122,022
19	145	10,154,367	3,095,263	986,225	588,100	398,125	240,840
20	115	7,969,197	2,766,001	910,048	554,014	356,034	282,358
21	60	4,346,118	2,048,272	704,756	429,768	274,988	330,465
22	50	2,554,037	2,253,054	806,154	503,632	302,522	315,343
23	32	1,504,498	1,566,054	579,008	356,576	222,432	304,105
24	23	818,257	1,621,901	613,214	389,077	224,137	256,614
25	18	461,753	1,862,622	702,224	469,879	232,345	210,700
26	15	268,527	1,699,542	661,589	441,887	219,702	327,674
27	5	10,764	533,233	208,039	142,146	65,893	55,240
28	4	75,924	456,951	175,040	122,077	52,963	22,546
29	4	60,182	367,939	148,029	105,579	42,450	46,748
30	3	3,357	254,708	99,090	78,660	20,430	18,560
32	1	12,994	247,131	92,244	80,300	11,944	7,968
39	1	2,470	254,077	95,468	98,130	— 2,662	— 31,331

* 40,271 of population returned as in 45 Asylums and 5 Military Camps and Hospitals, as well as 26,983 deaths occurring in the same, are excluded.

TABLE 38.—THE **Districts** of **England and Wales** (including **London**) CLASSIFIED according to **Mortality**; the calculated results deduced from facts in Table 37.

MEAN ANNUAL RATES of MORTALITY per 1000 Persons, 1861-70.	Number of Districts at each Rate of Mortality in Col. 1.	ACRES to a Person, 1861-71.	ANNUAL RATES PER 1000 LIVING, 1861-70.			ANNUAL INCREASE of ENUMERATED POPULATION per 1000 living, 1861-71.
			BIRTHS. *	DEATHS. *	EXCESS of BIRTHS over DEATHS.	
ENGLAND & WALES	619	1·74	35·1	22·4‡	12·6‡	† 12·4
15	1	11·64	29·3	15·1	14·2	— 8·1
16	16	4·42	29·5	15·9	13·6	24·5
17	37	3·33	30·3	17·0	13·3	13·1
18	89	4·03	31·5	18·1	13·4	8·4
19	145	3·28	31·9	19·0	12·9	7·8
20	115	2·88	32·9	20·0	12·9	10·2
21	60	2·12	34·4	21·0	13·4	16·1
22	50	1·13	35·8	22·4	13·4	14·0
23	32	·96	37·0	22·8	14·2	19·4
24	23	·50	37·8	24·0	13·8	15·8
25	18	·23	37·7	25·2	12·5	11·3
26	15	·16	38·9	26·0	12·9	19·3
27	5	·02	39·0	26·7	12·4	10·4
28	4	·17	38·3	26·7	11·6	4·9
29	4	·16	40·2	28·7	11·5	12·7
30	3	·01	38·9	30·9	8·0	7·3
32	1	·05	37·3	32·5	4·8	3·2
39	1	·01	37·6	38·6	—1·0	—12·3
28—39	13	·10	38·6	30·7	7·9	4·1

* The Annual Birth and Death Rates per 1000 living were obtained by dividing the Annual Births and Deaths in the groups of Districts by the Mean Population of those Districts.

† This column shows the proportional Annual Increase of enumerated Population to the *Mean Population* 1861-71.

‡ The Deaths in Institutions and Camps mentioned at the foot of preceding Table are included in the rate for England and Wales.

Note.—The minus sign (—) implies a decrease.

TABLE 39.—Of the **Districts** of **England and Wales** (including **London**) the NUMBER of DISTRICTS **at** and **above** each **Rate of Mortality.**

[This Table is formed by the addition from the bottom of each column of Table 37.]

MEAN ANNUAL RATES of MORTALITY per 1000 Persons, 1861-70.	No. of Districts having a Mortality *at and above* each Rate of Mortality in Col. 1.	AREA in Acres.	MEAN POPULATION, 1861-71.	BIRTHS, 1861-70.	DEATHS, [illegible]	EXCESS of BIRTHS over DEATHS, 1861-70.	INCREASE of ENUMERATED POPULATION, 1861-71.
15	619	37,319,221	21,348,974	7,500,096	4,767,567	2,732,529	2,646,042
16	618	37,171,405	21,336,275	7,496,378	4,765,651	2,730,727	2,647,065
17	602	[illegible]	[illegible]	7,429,391	4,729,498	2,699,893	2,591,346
18	565	34,093,868	20,486,102	7,240,758	4,623,421	2,617,332	2,509,852
19	476	28,212,445	19,026,728	6,781,128	4,359,825	2,421,303	2,387,830
20	331	18,058,078	15,931,465	5,794,903	3,771,725	2,023,178	2,146,990
21	216	10,088,881	13,165,464	4,884,855	3,217,711	1,667,144	1,864,632
22	156	5,742,763	11,117,192	4,180,099	2,787,943	1,392,156	1,584,167
23	106	3,188,726	8,864,158	3,373,945	2,284,311	1,089,634	1,218,824
24	74	1,684,228	7,298,104	2,794,937	1,927,735	867,202	914,719
25	51	[illegible]	5,676,203	2,181,723	1,538,658	643,065	658,105
26	33	434,218	3,813,581	1,479,499	1,068,779	410,720	447,405
27	18	165,691	2,114,039	817,910	626,892	191,018	119,731
28	13	154,927	1,580,806	609,871	484,746	125,125	64,491
29	9	79,003	1,123,855	434,831	362,669	72,162	41,945
30	5	[illegible]	755,916	286,802	257,090	29,712	− 4,803
32	2	15,464	501,208	187,712	[illegible]	9,282	− 23,363
39	1	2,470	254,077	95,468	98,130	− 2,662	− 31,331

TABLE 40 (calculated from Table 39.)—SHOWING the MEAN AREA and POPULATION **1861-71,** also ANNUAL BIRTHS and DEATHS in the Ten Years **1861-70,** and INCREASE of POPULATION **1861-71,** in an **Average District** of several selected GROUPS of DISTRICTS.

MEAN ANNUAL RATES of MORTALITY per 1000 Persons, 1861-70.	N[illegible] of [illegible]	MEAN AREA in square miles.	[illegible] POPULATION, 1861-71.	AVERAGE ANNUAL NUMBERS, 1861-70.			ANNUAL INCREASE of ENUMERATED POPULATION, 1861-71.
				BIRTHS.	DEATHS.	[illegible] of BIRTHS over DEATHS.	
15	619	94·20	34,489	1211·6	770·2	[illegible]	427·5
17	602	93·87	35,065	1234·1	785·6	448·5	430·5
20	331	85·24	48,131	1750·7	1139·5	611·2	648·6
23	106	47·00	83,624	3183·0	2155·0	1028·0	1149·8
26	33	20·56	115,563	4483·3	3238·7	1244·6	1355·8
29	9	13·72	124,873	4831·5	4029·7	801·8	[illegible]

It will be seen that in an average district of 331 districts, in which the rate of mortality is 20 per 1000 or higher, the area is 85·24 square miles; the population is 48,131; the mean annual number of births is 1751, of deaths 1140, the annual addition to the population by excess of births over deaths is 611 and the annual increase of population 649.

TABLE 41.—OF the **Districts** of **England and Wales** (including **London**), the NUMBER of DISTRICTS **at** and **above** certain **Rates of Mortality**, with the DENSITY and BIRTH, DEATH, &c. RATES in an AVERAGE DISTRICT of each GROUP.

MEAN ANNUAL RATES of MORTALITY per 1000 Persons, 1861-70.	Number of Districts having a Mortality *at and above* each Rate of Mortality in Col. 1.	PERSONS to a square mile, 1861-71.	ANNUAL RATES, 1861-70, PER 1000 LIVING.			ANNUAL INCREASE of ENUMERATED POPULATION, 1861-71, to 1000 living in the middle of the period.
			BIRTHS.	DEATHS.	EXCESS of BIRTHS over DEATHS.	
15	619	366	35·13	22·33	12·80	12·39
17	602	374	35·20	22·41	12·79	12·28
20	331	565	36·37	23·67	12·70	13·48
23	106	1779	38·06	25·77	12·29	13·75
26	33	5625	38·80	28·03	10·77	11·73
29	9	9137	38·69	32·27	6·42	3·73

TABLE 42.—THE **Districts** of **England and Wales** (excluding **London**) CLASSIFIED according to **Mortality**.

MEAN ANNUAL DEATH-RATES per 1000 Persons, 1861-70.	Number of Districts at each Rate of Mortality in Col. 1.	AREA in Acres.	MEAN POPULATION, 1861-71.	BIRTHS, 1861-70.	DEATHS, 1861-70.	EXCESS of BIRTHS over DEATHS, 1861-70.	INCREASE of ENUMERATED POPULATION, 1861-71.
15	1	147,816	12,699	3,718	1,916	1,802	− 1,023
16	15	1,002,531	201,577	60,635	32,223	28,412	42,544
17	37	2,072,758	622,903	188,638	106,077	82,561	81,494
18	89	5,881,423	1,459,374	459,625	263,596	196,029	122,022
19	142	10,124,950	2,831,239	902,811	536,364	366,447	160,654
20	114	7,965,262	2,661,877	875,720	532,189	343,531	240,702
21	59	4,338,674	1,813,720	632,396	381,067	251,331	233,262
22	48	2,548,258	1,858,348	664,929	408,728	256,201	234,229
23	30	1,496,107	1,289,465	477,996	296,010	181,986	217,989
24	23	818,257	1,621,901	613,214	389,077	224,137	256,614
25	14	426,327	1,235,659	480,641	310,207	170,434	179,878
26	10	259,528	1,179,629	470,362	306,051	164,311	313,961
27	8	9,185	353,395	138,751	94,553	44,218	42,191
28	2	74,646	234,208	92,221	65,639	26,582	25,553
29	3	59,037	314,123	129,624	90,825	38,799	47,268
30	1	2,736	128,464	53,113	38,293	14,820	21,796
32	1	12,994	247,131	92,244	80,300	11,944	7,968
39	1	2,470	254,077	95,468	98,130	− 2,662	− 31,331

TABLE 43.—THE **Districts** of **England and Wales** (excluding **London**) grouped according to **Mortality.**

(Obtained from Table 42.)

MEAN ANNUAL DEATH-RATES per 1000 Persons, 1861-70.	Number of Districts at the Rates of Mortality in Col. 1.	AREA in Acres.	AREA in Square Miles.	MEAN POPULATION, 1861-71.	BIRTHS, 1861-70.	DEATHS, 1861-70.	EXCESS of BIRTHS over DEATHS, 1861-70.	INCREASE of ENUMERATED POPULATION, 1861-71.
15-39	593	37,243,859	58,194	18,319,849	6,432,108	4,031,225	2,400,883	2,195,771
15-17	53	3,223,105	5,036	837,179	252,991	140,216	112,775	123,015
18-20	345	23,971,635	37,456	6,952,490	2,238,156	1,332,149	906,007	523,378
21-23	137	8,383,039	13,099	4,961,533	1,775,323	1,085,805	689,518	685,480
24-26	47	1,504,112	2,350	4,037,189	1,564,217	1,005,335	558,882	750,453
27-30	9	146,504	229	1,030,250	413,709	289,290	124,419	136,808
32	1	12,904	20	247,131	92,244	80,300	11,944	7,968
39	1	2,470	3·86	254,077	95,468	98,130	− 2,662	− 31,331

TABLE 44.—THE **Districts** of **England and Wales** (excluding **London**) grouped according to **Mortality.**

(Calculated from Table 43.)

MEAN ANNUAL RATES of MORTALITY per 1000 Persons, 1861-70.	Number of Districts at the Rates of Mortality in Col. 1.	ACRES to a Person, 1861-71.	PERSONS to a Square Mile, 1861-71.	ANNUAL RATES, 1861-70, PER 1000 LIVING.			ANNUAL INCREASE of POPULATION, 1861-71, per 1000 living in the middle of the period.
				BIRTHS.	DEATHS.	EXCESS of BIRTHS over DEATHS.	
15-39	593	2·03	315	35·11	22·00	13·11	11·99
15-17	53	3·85	166	30·22	16·75	13·47	14·69
18-20	345	3·45	186	32·19	19·16	13·03	7·53
21-23	137	1·69	379	35·78	21·88	13·90	13·82
24-26	47	·37	1,718	38·75	24·90	13·84	18·59
27-30	9	·14	4,499	40·16	28·08	12·08	13·28
32	1	·05	12,357	37·33	32·49	4·83	3·22
39	1	·01	65,823	37·57	38·62	− 1·05	− 12·33

TABLE 45.—OF the **Districts** of **England and Wales** (excluding **London**), the NUMBER of DISTRICTS **at** and **above** each **Rate of Mortality.** (This Table is formed by the addition, from the bottom, of each Column of Table 42.)

MEAN ANNUAL RATES of MORTALITY per 1000 Persons, 1861-70.	Number of Districts having a Mortality *at and above* each Rate of Mortality in Col. 1.	AREA in Acres.	MEAN POPULATION, 1861-71.	BIRTHS, 1861-70.	DEATHS, 1861-70.	EXCESS of BIRTHS over DEATHS, 1861-70.	INCREASE of ENUMERATED POPULATION, 1861-71.
15	593	37,243,859	18,319,849	6,432,108	4,031,225	2,400,883	2,195,771
16	592	37,096,043	18,307,150	6,428,390	4,029,309	2,399,081	2,196,794
17	577	36,093,512	18,105,573	6,367,755	3,997,086	2,370,669	2,154,250
18	540	34,020,754	17,482,670	6,179,117	3,891,009	2,288,108	2,072,756
19	451	28,139,331	16,023,296	5,719,492	3,627,413	2,092,079	1,950,734
20	309	18,014,381	13,192,057	4,816,681	3,091,049	1,725,632	1,790,080
21	195	10,049,119	10,530,180	3,940,961	2,558,860	1,382,101	1,540,378
22	136	5,710,445	8,716,460	3,308,563	2,177,793	1,130,770	1,316,116
23	88	3,162,187	6,858,112	2,643,634	1,769,065	874,569	1,061,887
24	58	1,666,080	5,568,647	2,165,638	1,473,055	692,583	863,698
25	35	847,823	3,946,746	1,552,424	1,083,978	468,446	607,284
26	21	421,496	2,711,067	1,071,783	773,771	298,012	427,406
27	11	161,968	1,531,458	601,421	467,720	133,701	113,445
28	8	152,783	1,178,063	462,670	378,187	89,483	71,254
29	6	78,137	943,795	370,449	307,548	62,901	45,701
30	3	18,200	629,672	240,825	216,723	24,102	− 1,567
32	2	16,464	501,208	187,712	178,430	9,282	− 23,363
39	1	2,470	254,077	95,468	98,130	− 2,662	− 31,331

TABLE 46.—**Comparative Mortality** of **England** and of its **Metropolis, 1861-70.**

——		ALL AGES.	Under 5 Years.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75—	85 and upwards.
ENGLAND (exclusive of LONDON).														
MEAN POPULATION.	PERSONS	18,360,120	2,493,566	2,200,324	1,977,704	1,773,412	1,617,639	2,633,869	2,079,226	1,598,619	1,093,665	629,446	230,399	32,251
	Males	9,002,130	1,249,722	1,100,739	998,361	889,736	772,878	1,259,074	1,007,267	779,703	531,414	296,515	104,025	12,696
	Females	9,357,990	1,243,844	1,099,585	979,343	883,676	844,761	1,374,795	1,071,959	818,916	562,251	332,931	126,374	19,555
DEATHS.	PERSONS	4,058,158	1,651,017	171,235	89,361	116,084	135,750	257,989	256,364	264,418	318,624	384,018	318,286	95,012
	Males	2,083,675	887,373	87,730	44,838	55,262	65,628	122,355	129,036	141,320	167,620	192,402	150,383	39,728
	Females	1,974,483	763,644	83,505	44,523	60,822	70,122	135,634	127,328	123,098	151,004	191,616	167,903	55,284
Annual Rate of Mortality per cent.	PERSONS	2·210	6·621	·778	·452	·655	·839	·980	1·233	1·654	2·913	6·101	13·815	29·460
	Males	2·315	7·101	·797	·449	·621	·849	·972	1·281	1·812	3·154	6·489	14·456	31·292
	Females	2·110	6·139	·759	·455	·688	·830	·987	1·188	1·503	2·686	5·755	13·286	28·271
LONDON.														
MEAN POPULATION.	PERSONS	3,029,125	392,463	324,972	287,004	283,115	299,487	514,388	385,686	268,947	161,884	82,118	25,663	3,398
	Males	1,415,466	195,963	161,151	141,969	131,585	133,185	233,714	178,860	124,417	71,145	33,097	9,325	1,055
	Females	1,613,659	196,500	163,821	145,035	151,530	166,302	280,674	206,826	144,530	90,739	49,021	16,338	2,343
DEATHS.	PERSONS	736,342	320,283	29,585	11,923	15,300	21,304	50,074	57,225	58,717	61,548	60,372	39,702	10,219
	Males	375,814	170,317	15,095	6,026	7,659	10,963	25,379	30,661	31,953	31,196	27,413	15,761	3,391
	Females	360,528	149,966	14,490	5,897	7,731	10,341	24,695	26,564	26,764	30,352	32,959	23,941	6,828
Annual Rate of Mortality per cent.	PERSONS	2·431	8·161	·910	·415	·544	·711	·973	1·484	2·183	3·802	7·352	15·471	30·074
	Males	2·655	8·691	·937	·424	·582	·823	1·086	1·714	2·568	4·385	8·283	16·902	32·142
	Females	2·234	7·632	·885	·407	·510	·622	·880	1·284	1·852	3·345	6·723	14·654	29·142

TABLE 47.—**Average Annual Mortality per cent., 1861-70,** at the SEVERAL AGES in the **Districts of England and Wales,** the DISTRICTS of LONDON and the DISTRICT of BILLESDON being excluded.

NOTE.—The mean Rate of Mortality per cent. at *each Age* is got by dividing the sum of the rates in the whole of the Districts of the several Groups by the number of those Districts. The Male and Female rates are separately treated.

Mean Annual Rates of Mortality per 1000 persons.	Number of Districts at each Rate of Mortality.	Persons to a square Mile.	Sexes.	AVERAGE ANNUAL RATES OF MORTALITY *per Cent.* AT THE UNDER-MENTIONED AGES.												
				ALL AGES.	Under 5	5—	10—	15—	20—	25—	35—	45—	55—	65—	75—	85 & upwards.
15	1	55	M.	1·543	3·301	·442	·410	·355	·366	·761	·743	1·205	2·272	6·419	14·432	25·385
			F.	1·478	2·611	·361	·375	·382	·379	·791	·868	1·207	2·121	4·818	14·054	29·444
16	14	131	M.	1·672	3·971	·586	·389	·507	·761	·729	·900	1·261	2·215	5·350	13·087	28·496
			F.	1·569	3·280	·560	·373	·662	·751	·770	·961	1·153	2·140	4·974	12·788	26·070
17	37	192	M.	1·807	4·275	·556	·325	·482	·757	·880	1·046	1·401	2·449	5·501	13·227	28·936
			F.	1·669	3·491	·541	·336	·647	·777	·878	1·021	1·205	2·170	5·134	12·604	27·069
18	89	159	M.	1·855	4·564	·569	·360	·489	·760	·858	·981	1·349	2·377	5·448	13·293	33·068
			F.	1·768	3·942	·563	·409	·647	·807	·866	·967	1·168	2·175	5·070	12·666	29·697
19	142	179	M.	1·963	5·053	·606	·372	·541	·817	·888	1·009	1·413	2·490	5·586	13·531	31·125
			F.	1·851	4·296	·595	·429	·698	·852	·937	1·083	1·231	2·176	5·096	12·432	28·436
20	114	214	M.	2·081	5·677	·651	·389	·538	·836	·897	1·077	1·447	2·655	5·784	13·947	32·318
			F.	1·948	4·809	·649	·447	·718	·865	·978	1·090	1·285	2·309	5·254	12·859	29·481
21	59	268	M.	2·187	6·227	·722	·449	·622	·892	·934	1·149	1·634	2·939	6·383	14·451	32·036
			F.	2·043	5·292	·714	·476	·753	·911	1·027	1·165	1·345	2·510	5·657	13·413	29·236
22	48	467	M.	2·310	7·041	·816	·466	·667	·898	1·002	1·263	1·738	3·109	6·634	14·576	32·415
			F.	2·096	6·015	·760	·460	·682	·842	1·006	1·173	1·436	2·586	5·762	13·561	29·634
23	30	552	M.	2·494	7·575	·882	·522	·711	·948	1·012	1·301	1·866	3·349	7·094	15·351	33·222
			F.	2·195	6·473	·820	·491	·750	·918	1·065	1·207	1·484	2·711	6·056	13·907	30·135
24	28	1,268	M.	2·518	8·427	·946	·551	·712	·855	·930	1·289	1·889	3·545	7·514	16·682	33·820
			F.	2·293	7·300	·907	·479	·711	·882	1·027	1·211	1·552	2·956	6·401	14·627	30·787
25	14	1,855	M.	2·665	8·786	·916	·585	·726	·920	1·062	1·454	2·190	4·045	8·065	17·193	33·870
			F.	2·379	7·684	·859	·482	·697	·876	1·033	1·290	1·703	3·191	6·804	15·180	28·981
26	10	2,909	M.	2·760	9·662	·966	·523	·727	·861	·990	1·439	2·274	4·142	8·247	17·554	35·706
			F.	2·438	8·282	·907	·476	·720	·856	1·036	1·334	1·804	3·414	7·151	15·650	30·259
27	3†	24,627	M.	3·000	9·506	·994	·447	1·094	1·196	1·541	1·939	2·929	4·331	8·744	17·356	35·686
			F.	2·423	8·416	·904	·437	·607	·761	·923	1·338	1·878	3·495	7·422	15·500	29·259
28	2†	2,009	M.	2·964	10·259	1·103	·539	·801	·975	1·217	1·702	2·505	4·337	8·370	18·493	34·080
			F.	2·632	8·998	1·007	·473	·770	·875	1·170	1·539	1·983	3·726	7·145	15·414	29·576
29	3†	8,334	M.	2·996	10·285	1·212	·618	·808	·946	1·176	1·711	2·525	4·330	8·956	17·643	32·670
			F.	2·656	8·997	1·090	·501	·720	·829	1·010	1·345	2·001	3·433	7·209	15·761	31·511
30	Leeds	30,050	M.	3·217	11·292	1·045	·582	·797	1·030	1·302	1·908	2·928	5·132	9·939	22·413	34·348
			F.	2·760	9·645	·944	·539	·716	·955	1·170	1·554	2·208	3·991	8·543	17·863	27·917
32	Manchester.	12,357	M.	3·538	11·790	1·401	·651	·939	1·167	1·469	2·325	3·455	6·017	10·876	20·978	40·714
			F.	3·046	10·390	1·152	·579	·740	·955	1·307	1·926	2·876	5·031	9·426	17·300	27·387
39	Liverpool.	65,823	M.	4·097	14·475	1·647	·668	·945	1·422	1·998	3·007	4·372	7·095	11·918	19·488	29·600
			F.	3·636	13·439	1·514	·614	·758	1·102	1·749	2·408	3·701	5·760	9·564	16·281	25·446

* The Mortality in *this* column was deduced for each District by dividing the annual *Deaths* of *Persons* by the average number of *Persons living* in the respective Districts.

† The three Districts with a rate of 27 per 1000 are East Stonehouse, Birmingham, and Salford; the two with a rate of 28 per 1000, Preston and Newcastle-upon-Tyne; and the three with a rate of 29 per 1000, Bristol, Wigan, and Sheffield.

England and Wales (excluding London).—Density and Mortality.

TABLE 48.—SHOWING in a COMPARATIVE VIEW the **actual Mortality** (Annual Rate per 1000) in **Seven Groups** of **Districts** of **England and Wales** (exclusive of **London**); with the MORTALITY deduced from the DENSITIES (Population to a Square Mile) of those GROUPS.

Number of Group.	Number of Districts in each Group.	RANGE of MORTALITY.	DENSITY—Persons to a Square Mile.	PROXIMITY in Yards.	OBSERVED MORTALITY.	CALCULATED MORTALITY.
Columns -	1.	2.	3.	4.	5.	6.
ENGLAND & WALES (exclusive of LONDON) -	593	15–39	315	107	22·00	20·41
I.	53	15–17	166	147	16·75	18·90
II.	345	18–20	186	139	19·16	19·16
III.	137	21–23	379	97	21·88	20·87
IV.	47	24–26	1,718	46	24·90	25·02
V.	9	27–30	4,499	28	28·08	28·08
VI.	Manchester District	32	12,357	17	32·49	37·70
VII.	Liverpool District	39	65,823	7	38·62	38·74

m being the mortality in any group and m' being the higher mortality at any other group, D and D′ being the density of population in the two groups, then

$$m' = m\left(\frac{D'}{D}\right)^{n} = m\left(\frac{D'}{D}\right)^{0\cdot11998}$$

The mortality of districts is nearly as the 12th root of their densities.

The starting point being 19·16, the calculated rates (see col. 6.) in the other groups are deduced by the formula from the densities as given in column 3; or taking the above value of n, and p and p' as the mean proximity of person to person, we have $m' = m\left(\frac{p}{p'}\right)^{2n}$. So the mortality of districts is nearly as the 6th root of the proximities.

The Table may be read thus:—In 47 districts having a density of 1718 persons to a square mile, a proximity of 46 yards, the annual mortality (1861–70) ranged from 24 to 26—the exact mortality was 24·90—per 1000. The mortality calculated from that of the 345 districts having a mortality of 19·16, a density of 186 persons to a square mile, was 25·02, thus differing from the actual mortality by only 0·12.

It will be noticed that there is not much difference in the density of groups I. and II., and yet the mortality in group I. is much lower than the mortality in group II. It may therefore be inferred that there are many more small towns in group II. than in group I., and in those small towns the effects of a higher density are felt, whereas in group I. the population is more evenly distributed over the area. Were the population aggregated to the same extent as it is in group II., it is probable that the mortality would approximate to 18·90.

TABLE 49.—**Mean Annual Rate of Mortality per Cent., 1861-70,** at the various AGES in **Districts,*** grouped according to the RATE OF MORTALITY of PERSONS LIVING at ALL AGES.

Annual Rates of Mortality per 1000 *Persons* living at all Ages - - -	Range 15—17 Mean - 16	18—20 19	21—23 22	24—26 25	27—30 28·5	32	39
Density: Persons to one Square Mile -	166	186	379	1,718	4,499	12,357	65,823
Number of Districts at the above Rates of Mortality - -	53	345	137	47	9	1	1
Annual Birth Rates, per 1000 *Persons* living, in the above groups of Districts	30·2	32·2	35·8	38·7	40·2	37·3	37·6

MEAN RATES of *Mortality per cent.*† at the various AGES in the above groups of DISTRICTS.

——	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
ALL AGES -	1·757	1·631	1·974	1·862	2·284	2·095	2·613	2·349	3·019	2·584	3·538	3·046	4·097	3·636
Under 5 - -	4·148	3·412	5·133	4·373	6·808	5·804	8·796	7·623	10·131	8·876	11·790	10·590	14·475	13·429
5— - - -	·561	·543	·612	·604	·790	·753	·941	·893	1·097	·993	1·401	1·152	1·647	1·514
10— - - -	·342	·382	·374	·429	·471	·474	·540	·479	·538	·478	·651	·579	·668	·614
15— - - -	·480	·641	·526	·690	·657	·727	·719	·709	·900	·693	·939	·740	·945	·758
20— - - -	·750	·763	·808	·845	·906	·888	·876	·874	1·045	·830	1·167	·955	1·422	1·102
25— - - -	·829	·839	·880	·930	·975	1·028	·974	1·031	1·321	1·034	1·469	1·307	1·998	1·749
35— - - -	·997	·992	1·024	1·040	1·222	1·177	1·370	1·261	1·807	1·407	2·325	1·926	3·007	2·408
45— - - -	1·354	1·186	1·408	1·232	1·721	1·407	2·060	1·651	2·700	1·979	3·455	2·876	4·372	3·701
55— - - -	2·375	2·145	2·515	2·220	3·086	2·581	3·821	3·124	4·421	3·581	6·017	5·031	7·095	5·760
65— - - -	5·454	5·063	5·617	5·117	6·627	5·781	7·840	6·681	8·864	7·414	10·876	9·426	11·918	9·564
75— - - -	13·222	12·586	13·607	12·633	14·692	13·573	17·020	15·009	18·266	15·831	20·978	17·300	19·488	16·281
85 and upwards -	28·622	26·811	31·755	29·107	32·429	29·572	34·236	30·112	34·175	29·931	40·714	27·387	29·600	25·446

PERSONS.

(The Rates are the Means of the above Male and Female Rates.)

ALL AGES -	1·694	1·918	2·190	2·481	2·802	3·292	3·867
Under 5 - -	3·780	4·753	6·306	8·210	9·504	11·190	13·952
5— - - -	·552	·608	·772	·917	1·045	1·277	1·581
10— - - -	·362	·402	·473	·510	·508	·615	·641
15— - - -	·561	·608	·692	·714	·797	·840	·852
20— - - -	·757	·827	·897	·875	·933	1·061	1·262
25— - - -	·834	·905	1·002	1·003	1·178	1·388	1·874
35— - - -	·995	1·032	1·200	1·316	1·607	2·126	2·708
45— - - -	1·270	1·320	1·564	1·856	2·340	3·166	4·037
55— - - -	2·260	2·368	2·835	3·473	4·001	5·524	6·428
65— - - -	5·259	5·367	6·204	7·261	8·139	10·151	10·741
75— - - -	12·904	13·120	14·133	16·015	17·049	19·139	17·885
85 and upwards -	27·717	30·431	31·001	32·174	32·053	34·051	27·523

This Table of the *mean Mortality* at all ages of Males and Females shows that in 53 Healthy Districts the Mortality was 16·94 per 1000, and in the group of 345 Districts it was 19·18 per 1000.

The mean rates of Mortality of Persons are equivalent to the rates of Mortality of equal numbers of the two sexes at each age. Thus the Mortality of the 53 Healthiest Districts was 1·757 for Males, 1·631 for Females, and 1·694 for Persons (50 Males and 50 Females); as $\frac{1·757 + 1·631}{2} = \frac{3·388}{2} = 1·694$.

* The London Districts are excluded on account of the difficulty of correcting for displaced deaths in Hospitals. For the mortality of London in the aggregate *see* page clvi.

† By passing the decimal point one figure to the right-hand, thus, instead of 1·757 at "All Ages" in the first Column, read 17·57, the Table shows the rate per 1000.

TABLE **50.—Average Annual Rate of Mortality per Cent., 1861-70,** at different **Ages** in **Fifty-one Healthy Districts** of **England and Wales,** in the **whole** of **England and Wales,** in **London,** and in **Manchester** and **Liverpool Districts** respectively.

AGES.	MALES.					FEMALES.				
	FIFTY-ONE* HEALTHY DISTRICTS.	ENGLAND AND WALES.	LONDON.	MANCHESTER DISTRICT.	LIVERPOOL DISTRICT.	FIFTY-ONE* HEALTHY DISTRICTS.	ENGLAND AND WALES.	LONDON.	MANCHESTER DISTRICT.	LIVERPOOL DISTRICT.
ALL AGES -	1·756	2·361	2·655	3·538	4·097	1·623	2·128	2·234	3·046	3·636
0—	4·246	7·316	8·691	11·790	14·475	3·501	6·343	7·632	10·590	13·429
5—	·566	·815	·937	1·401	1·647	·562	·776	·885	1·152	1·514
10—	·346	·446	·424	·651	·668	·390	·448	·407	·579	·614
15—	·483	·616	·582	·939	·945	·628	·662	·510	·740	·758
20—	·738	·845	·823	1·167	1·422	·734	·796	·622	·955	1·102
25—	·824	·990	1·086	1·469	1·998	·807	·968	·880	1·307	1·749
35—	1·007	1·346	1·714	2·325	3·007	·975	1·203	1·284	1·926	2·408
45—	1·346	1·916	2·568	3·455	4·372	1·176	1·555	1·852	2·876	3·701
55—	2·372	3·300	4·385	6·017	7·095	2·114	2·777	3·345	5·031	5·760
65—	5·456	6·669	8·283	10·876	11·918	4·995	5·880	6·723	9·426	9·564
75—	13·128	14·658	16·902	20·978	19·488	12·378	13·443	14·654	17·300	16·281
85 & upwds.	28·492	31·357	32·142	40·714	29·600	26·400	28·364	29·142	27·387	25·446

* In this Table two districts are excluded from the *fifty-three* Healthy Districts shown in other Tables, namely, Barnet and King's Norton, on account of their proximity, the former to London, and the latter to Birmingham.

TABLE **51.—Average Annual Rate of Mortality per Cent., 1861-70,** at different **Ages** in **Fifteen Great Town Districts,** and in the same coupled with **Liverpool District** and **London.**

AGES.	MALES.		FEMALES.	
	Fifteen great town Districts, including Manchester.	Seventeen great town Districts, including previous fifteen districts, with districts of Liverpool and London.	Fifteen great town Districts, including Manchester.	Seventeen great town Districts, including previous fifteen districts, with districts of Liverpool and London.
ALL AGES - -	2·948	2·833	2·591	2·423
0— - - -	10·177	9·497	8·888	8·357
5— - - -	1·060	1·016	·973	·946
10— - - -	·533	·476	·503	·451
15— - - -	·739	·658	·709	·591
20— - - -	·921	·890	·864	·725
25— - - -	1·139	1·156	1·081	·990
35— - - -	1·722	1·791	1·446	1·396
45— - - -	2·617	2·687	2·044	2·008
55— - - -	4·618	4·602	3·685	3·566
65— - - -	8·996	8·667	7·567	7·091
75— - - -	18·846	17·614	16·235	15·175
85 and upwards -	34·933	32·865	30·109	29·283
Mean Population, 1861-71	821,460	2,361,736	876,596	2,619,522
Deaths, 1861-70 - -	242,157	669,102	227,105	634,632
Area in square miles -	278·08	399·69	278·08	399·69
Persons to 1 square mile -	6,106	12,463	6,106	12,463

The fifteen town Districts are :—Manchester, Salford, Bradford, Birmingham, Sheffield, Leeds, Newcastle-upon-Tyne, Hunslet, Leicester, Gateshead, Bristol, Hull, Exeter, Worcester, and Shrewsbury.

TABLE 52.—SHOWING **how much** the **Mortality** at each of TWELVE AGES is **raised** in SEVEN GROUPS of DISTRICTS experiencing different RATES OF MORTALITY at ALL AGES.

(The London Districts are in one Group, *see* Table 46.)

Annual Rates of Mortality per 1000 Persons living at all Ages, 1861-70 -	Range 18–20 / Mean - 19	21–23 / 22	24	24–26 / 25	27–30 / 28·5	32	39
Number of Districts at the above Rates of Mortality - -	345	137	London.	47	9	Manchester District.	Liverpool District.
INCREASE *per cent.* ON THE RATES OF THE FIFTY-THREE HEALTHY DISTRICTS.							
ALL AGES -	13·2	29·3	44·3	46·5	65·4	94·3	128·3
Under 5 - -	25·7	66·8	115·9	117·2	151·4	196·0	269·1
5– - -	10·1	39·9	65·0	66·1	89·3	131·3	186·4
10– - -	11·0	30·7	14·9	40:9	40·3	69·9	77·1
15– - -	8·4	23·4	−2·7	27·3	42·1	49·7	51·9
20– - -	9·2	18·5	−4·5	15·6	23·9	40·2	66·7
25– - -	8·5	20·1	17·9	20·3	41·2	66·4	124·7
35– - -	3·7	20·6	50·7	32·3	61·5	113·7	172·2
45– - -	3·9	23·1	74·0	46·1	84·3	149·3	217·9
55– - -	4·8	25·4	71·0	53·7	77·0	144·4	184·4
65– - -	2·1	18·0	42·7	38·1	54·8	93·0	104·2
75– - -	1·7	9·5	22·3	24·1	32·1	48·3	38·6
85 and upwards -	9·8	11·8	10·6	16·1	15·6	22·9	−·7

This Table of the increase of mortality may be read thus:—In *345 Districts* having a mortality at all ages of *18–20 per 1000*, the mortality at the *ages under five years* shows an excess of 25·7 per cent. on the rate at that group of ages in the 53 Healthy Districts; *in 137 Districts* having a mortality at all ages of 21–23 it is 66·8 per cent. in excess; ..... in Liverpool it is 269·1 per cent. in excess, or out of the same numbers of Children living, the deaths are between three and four times as many in Liverpool as they are in the Healthy Districts.

TABLE 53.—**Relative Mortality, 1861-70,** at each of **Twelve Ages** in EIGHT GROUPS of **Districts** of **England and Wales,** the DEATHS at each AGE in the 53 HEALTHY DISTRICTS being represented by **100.**

Mortality Range - -	15–17	18–20	21–23	24	24–26	27–30	32	39
Persons to one sq. mile	166	186	379	25,671	1,718	4,499	12,357	65,823

AGES.	Persons living.	DEATHS, OUT OF PERSONS as given in Column 2. In 53 Healthy Districts.	In 345 Districts.	In 137 Districts.	In London.	In 47 Districts.	In 9 Districts.	In Manchester District.	In Liverpool District.
ALL AGES -	5,903	100	113	129	144	146	165	194	228
0–	2,646	100	126	167	216	217	251	296	369
5–	18,116	100	110	140	165	166	189	231	286
10–	27,624	100	111	131	115	141	140	170	177
15–	17,825	100	108	123	97	127	142	150	152
20–	13,210	100	109	118	95	116	124	140	167
25–	11,990	100	109	120	118	120	141	166	225
35–	10,050	100	104	121	151	132	162	214	272
45–	7,874	100	104	123	174	146	184	249	318
55–	4,425	100	105	125	171	154	177	244	284
65–	1,902	100	102	118	143	138	155	193	204
75–	775	100	102	110	122	124	133	148	139
85 & upwards	361	100	110	112	111	116	116	123	99

The Table may be read thus:—Out of 2646 Children living under five years of age, 100 die annually in the Healthy Districts; 126 in 345 Districts having rates of mortality of 18 to 20; ..... 296 in Manchester District; and 369 in Liverpool District.

TABLE 54.—**Relative Mortality** of **Males** and **Females, 1861-70,** at **Seven Ages** in EIGHT GROUPS of **Districts** of **England and Wales,** the DEATHS at each AGE in the 53 HEALTHY DISTRICTS being represented by **100.**

Mortality Range			15–17	18–20	21–23	24	24–26	27–30	32	39
Persons to one square mile			166	186	379	25,671	1,718	4,499	12,357	65,823
AGES.	Sex.	Numbers living.	DEATHS OF MALES AND FEMALES, out of Numbers given in Column 2.							
			In 53 Healthy Districts.	In 345 Districts.	In 187 Districts.	In London.	In 47 Districts.	In 9 Districts.	In Manchester District.	In Liverpool District.
ALL AGES	Males	5,692	100	112	130	151	149	172	201	233
	Females	6,131	100	114	128	137	144	158	187	223
0–5	Males	2,411	100	124	164	210	212	244	284	349
	Females	2,931	100	128	170	224	223	260	310	394
5–10	Males	17,825	100	109	141	167	168	196	250	294
	Females	18,416	100	111	139	163	164	183	212	279
25–35	Males	12,063	100	106	118	131	117	159	177	241
	Females	11,919	100	111	123	105	123	123	156	208
35–45	Males	10,030	100	103	123	172	137	181	233	302
	Females	10,061	100	105	119	129	127	142	194	243
45–55	Males	7,386	100	104	127	190	152	199	255	323
	Females	8,432	100	104	119	156	139	167	242	312
55–65	Males	4,211	100	106	130	185	161	186	253	299
	Females	4,662	100	103	120	156	146	167	235	269
65–75	Males	1,834	100	103	122	152	144	163	199	219
	Females	1,975	100	101	114	133	132	146	186	189

Out of 2411 Male Children living under 5 years of age 100 die annually in the Healthy Districts, ... 284 in the Manchester District, and 349 in the District of Liverpool.

TABLE 55.—Average Rates of Mortality in the Thirty Years 1841-70, in combination with Density of Population, in the 619 Districts of England and Wales grouped in Registration Divisions.

Mean Density of Population — Acres to a Person - - -	0—	1—	2—	3—	5—	7—	9 & upwards.
DIVISIONS.	AVERAGE ANNUAL RATES of MORTALITY per 1000 Persons, 1841-70.						
ENGLAND AND WALES	23·9	20·9	20·0	19·3	19·0	18·8	18·2
I. LONDON - - -	23·9	—	—	—	—	—	—
II. SOUTH-EASTERN -	21	19	19	18	19	19	—
III. SOUTH MIDLAND -	22	20	21	20	—	—	—
IV. EASTERN - -	22	19	20	20	20	—	—
V. SOUTH-WESTERN -	24	20	20	19	19	18	18
VI. WEST MIDLAND -	24	22	20	19	19	19	—
VII. NORTH MIDLAND -	25	22	20	19	20	17	—
VIII. NORTH-WESTERN -	26	22	20	19	20	—	—
IX. YORK - - -	25	22	22	20	19	19	19
X. NORTHERN - -	25	22	22	20	19	19	17
XI. WELSH - - -	—	24	21	21	19	19	19

The Table may be read thus:—In Division IV. the mean mortality of the districts of which the density of population is greatest, viz., less than one acre to a person, is 22 per 1000; in districts in which the density of population is one acre and less than two, the mean mortality is 19 per 1000; and so on.

The following particulars are interesting as regards the three sets of Districts (viz., those in Divisions IX., X., and XI.) that are least populous, there being 9 acres or upwards to each inhabitant.

DISTRICTS in Division IX.	ACRES to a Person.	ANNUAL MORTALITY per 1000, 1841-70.	DISTRICTS in Division X.	ACRES to a Person.	ANNUAL MORTALITY per 1000, 1841-70.	DISTRICTS in Division XI.	ACRES to a Person.	ANNUAL MORTALITY per 1000, 1841-70.
Sedbergh -	11	18	Haltwhistle -	14	17	Llandovery -	10	19
Settle - -	11	19	Bellingham -	35	17	Tregaron -	11	17
Helmsley -	9	19	Glendale - -	10	15	Builth - -	12	18
Pickering -	9	19	Rothbury -	23	15	Brecknock -	11	21
Aysgarth - -	14	20	Bootle - -	14	17	Knighton -	10	18
Reeth - -	11	20	East Ward -	12	17	Rhayader -	15	18
—	—	—	West Ward -	14	18	Machynlleth -	9	21
—	—	—	—	—	—	Dolgelly - -	11	19

Note.—Dulverton, in Division V., is the only other district with more than 9 acres to a person; it has an area of 10 acres, and the annual mortality in the 30 years was 18 per 1000 of population.

The population of the whole of Sedbergh district has slightly increased; that of the township of Sedbergh has decreased in consequence of the *absence* of labourers who were constructing a railway in 1861, while the larger populations in Garsdale and Dent are attributed to the *presence* of labourers forming a railway from Settle to Carlisle.

The population of Settle in 1871 was 15,134 against 12,528 in 1861; an increase in the township of Burton-in-Lonsdale is ascribed to the extension of a cotton factory, and in some other townships to the presence of labourers employed in constructing a railway.

A very slight decrease in the population of Helmsley occurred between 1861 and 1871, the two populations being 11,832 and 11,716. Helmsley township, with a population of 1437 in 1871, has an area of 8312 acres, and Kirkby Moorside a population of 1788 on 4506 acres.

In Pickering district the population rose from 10,549 in 1861 to 12,737 in 1871; in the townships of Rosedale West Side and Rosedale East Side there was a rapid increase owing to the development of ironstone mining, especially in the latter township, where the population at the two censuses was 446 and 2041. The township of Pickering has a population of 3689 on 16,037 acres.

In some few of the townships comprised in Aysgarth district there was a decrease in the population in consequence of the abandonment of lead mines, but the general population of the district was nearly stationary. There is no thickly populated township in Aysgarth district.

In all the townships and parishes forming the district of Reeth the population declined, in Muker and Melbecks through the falling off in the productiveness of the lead mines. Muker township, with a population in 1871 of 913 only, has an area of 30,192 acres. All the townships in this district are sparsely populated.

The increase of population in a few of the parishes and townships in Haltwhistle district is due to the extension of collieries, but in the whole district the increase is not large. The township of Haltwhistle, with an area of 3133 acres, has a population of 1668.

The population of Bellingham district in 1871 was identical with that in 1861. Plashetts and Tynehead township had a population of 766 in 1871 against 494 in 1861, the increase being attributed to the extension of the Plashetts Colliery. The parish of Corsenside, with the largest population in the district, and which more than doubled itself in the 10 years 1861-1871, has an area of 11,504 acres and a population of 1067: the rapid growth of the population is due to the demand for labour at Sir Wm. Armstrong's Ironworks. Bellingham township has a population of 833 on an area of 2352 acres; the population has slightly decreased.

The district of Glendale does not include any large town. The parishes of Wooler and Chatton have populations of 1610 on 4917 acres, and 1538 on 17,335 acres respectively; in both parishes the population has decreased. The parishes of Carham (area 10,712, population 1210), of Ford (area 11,727, population 1841), and of Lowick (area 12,878, population 1770), all show a decrease of population, attributed to emigration and to migration in search of more remunerative employment.

The district of Rothbury is composed of many small townships. Rothbury, possessing the largest population, namely 1074, has an area of 3366 acres. An increase of 276 in the population since 1861 is mainly due to improvements effected by Sir Wm. Armstrong and to the erection of a railway station and gasworks.

In the district of Bootle the township of Millom shows the largest population, namely 4307 (against 1541 in 1861), on 13,531 acres. The large increase is attributed to the opening of iron ore pits.

In East Ward district the parishes of Appleby St. Michael or Bongate, and Appleby St. Lawrence together contained in 1861, 2824 persons; in 1871, 3225 persons; the increase in these parishes, as well as in other parishes and townships of the district, is stated to be due to the temporary presence of labourers constructing the Settle and Carlisle railway.

In West Ward district the population of the parish of Shap rose from 991 in 1861 to 1270 in 1871, the increase being due to the erection of cottages for the accommodation of granite quarry labourers; the area of the parish is 27,177 acres. The development of the Greenside Lead Mines caused a rise in the population of Patterdale-with-Hartsop township; in 1871 the population was 805 on an area of 16,735 acres.

The district of Llandovery contains the parish of Llangadock with a population of 2830 on 15,642 acres; the parish of Llandingat (including Llandovery) with a population of 2379 on 8107 acres; and the parish of Conwil-Cayo with a population of 2002 on 41,785 acres. Llangadock exhibits a slight increase, while Conwil-Cayo shows a decrease, the causes assigned in the case of the latter being migration and emigration.

The only considerable township in Tregaron district is Caron-ys-Clawdd or Tregaron with a population of 1788, which appears to be nearly stationary. There is no workhouse for the Tregaron union.

Builth district is composed of several inconsiderable parishes and hamlets. The parish of Builth is thickly populated, having a population of 1080 on 712 acres; in 1861 the population was 1110. There is no workhouse for the Builth union.

In Brecknock district the chapelry of Lower Division or St. Mary, Brecknock, is the most densely populated; the population being 2711 on 705 acres. In 1861 the population was 2107.

The only considerable parish in Knighton district is Knighton; it has a population of 1946 and an area of 2461 acres.

In Rhayader district the parish of Rhayader with an area of only 188 acres has a population of 802, though the population has slightly decreased; in 1861 it was 846. The increase of population in the parishes of Cefnllys (population 471) and Llanbadarnfawr (population 589) is attributed to the erection of houses and cottages.

The population of Machynlleth township in 1861 was 1640; in 1871 it was 2028; the increase is attributed to the construction and working of a railway, and to the discovery and development of new slab quarries and lead mines. Towyn township also exhibits an increase of population, due to the construction of a railway; in 1871 the population was 3307 on 26,372 acres.

In Dolgelly district the parish of Dolgelly had a population of 3789 in 1871; in 1861 the population was 3457; its area is 25,607 acres. The increase of population in some other parishes is attributed to the great extension of slate quarrying.

Table 56.—Density and Mortality of the Districts of London in Three Decenniads, the Districts arranged according to the Density of Population in the Decenniad 1861–70.

Districts.	Density of Population. Acres to a Person.			Annual Mortality. Deaths to 1000 Living.			
	1841-50	1851-60	1861-70	1841-50	1851-60	1861-70	Mean of 30 Years 1841-70
Westminster (St. James)*	·004	·005	·005?	22	23	23?	23?
St. Giles	·005	·005	·005	26	28	29	28
Holborn: Holborn	·004	·004		26	26		
„ Clerkenwell	·006	·006	·005	24	23	28	26
„ St. Luke	·004	·004		27	27		
Shoreditch	·007	·005	·005	27	24	26	26
Whitechapel	·005	·005	·005	29	28	30	29
St. George-in-the-East	·005	·005	·005	29	29	30	29
Strand: St. Martin-in-the-Fields	·012	·013	·006	24	23	25	24
„ Strand*	·004	·004		24	24		
London City: East London	·004	·004		27	27		
„ West London	·005	·005	·007	29	25	26	26
„ London City	·008	·009		23	23		
Bethnal Green	·009	·008	·007	25	23	27	25
Stepney	·012	·010	·008	25	27	28	27
Mile End Old Town		·011	·008		24	26	25
Marylebone	·010	·009	·009	24	24	25	24
St. Saviour Southwk: St. Geo. Southwk.	·006	·005		30	27		
„ Newington	·010	·009		26	24		
„ St. Saviour	·008	·008	·009	30	29	25	27
St. Olave Southwark: St. Olave							
„ Bermondsey	·017	·013		28	26		
„ Rotherhithe	·056	·042		28	25		
Chelsea	·018	·014	·012	27	26	26	26
St. George Han. Sq.: Westminster	·015	·014	·013	27	26	27	27
„ St. Geo. Han. Sq.	·017	·014	·013	19	19	19	19
Pancras	·018	·015	·013	23	22	23	23
Islington	·041	·025	·017	19	21	22	21
Lambeth	·031	·027	·021	25	23	23	24
Poplar	·060	·037	·024	22	24	26	24
Kensington	·076	·048	·032	20	19	21	20
Greenwich†	·060	·047	·035	27	24	26	26
Hackney	·078	·055	·038	19	19	20	19
Camberwell	·092	·069	·049	24	23	23	23
Hampstead	·204	·145	·087	18	17	16	17
Wandsworth	·258	·193	·118	19	20	19	19
Lewisham†	·595	·342	·217	17	18	19	18

* In consequence of the change in the District of Westminster (St. James) in 1868, the Density of Population and the Mortality in the 10 Years 1861-70 are not given for that District separately from the Strand District.

† The District of Woolwich having been formed out of the Districts of Greenwich and Lewisham so recently as 1st July 1868 is included in those Districts.

TABLE **57.—Density** and **Mortality,** in THREE DECENNIADS, of the **Districts** of **England and Wales** (exclusive of LONDON) in which the **Area** to a **Person** is less than **one acre,** the DISTRICT arranged according to the **Density of Population** in the DECENNIAD **1861–70.**

Density and Mortality, in THREE DECENNIADS, of the **Districts** of **England and Wales** (exclusive of LONDON) in which the **Area** to a **Person** is less than **one acre,** the DISTRICTS arranged according to the **Density of Population** in the DECENNIAD **1861-70**—*continued.*

DISTRICT.	COUNTY.	DENSITY OF POPULATION. ACRES TO A PERSON.			ANNUAL MORTALITY. DEATHS TO 1000 LIVING.			
		1841-50	1851-60	1861-70	1841-50	1851-60	1861-70	Mean of 30 Years 1841-70
South Shields	Durham	·48	·38	·26	26	24	24	25
Hunslet, Holbeck, Bramley	York, West Riding	·47	·40	·27	25	24	26	25
Ashton-under-Lyne	Lancaster	·35	·30	·29	26	27	25	26
Stockport	Chester	·35	·33	·32	25	26	25	25
Bolton	Lancaster	·41	·36	·32	27	27	26	27
Bury	„	·40	·35	·32	25	23	24	24
Walsall	Stafford	·56	·42	·33	24	26	24	25
Brentford	Middlesex (*ex.-met.*)	·52	·44	·34	21	22	20	21
Kings Lynn	Norfolk	·30	·30	·34	23	22	22	22
Rochdale	Lancaster	·52	·42	·35	24	24	24	24
Blackburn	„	·53	·41	·35	25	26	26	26
Haslingden	„	·58	·44	·36	22	22	23	22
Gateshead	Durham	·60	·48	·38	25	26	25	25
Halifax	York, West Riding	·49	·46	·40	23	24	24	25
Wolverhampton	Stafford	·58	·47	·42	27	23	24	26
Northampton	Northampton	·67	·56	·44	24	24	24	24
Bath	Somerset	·44	·44	·44	24	22	22	23
Hastings	Sussex	·78	·59	·45	18	18	20	19
Colchester	Essex	·60	·52	·45	24	22	22	23
Tynemouth	Northumberland	·66	·56	·45	24	23	24	24
Wigan	Lancaster	·66	·55	·47	28	27	29	28
Croydon	Surrey (*extra-met.*)	1·10	·84	·50	20	19	19	19
Cheltenham	Gloucester	·59	·53	·50	20	19	19	19
Kings Norton	Worcester	1·08	·73	·50	17	17	17	17
Huddersfield	York, West Riding	·61	·56	·53	23	23	24	23
Kingston	Surrey (*extra-met.*)	·89	·71	·54	18	18	18	18
Burton-upon-Irwell	Lancaster	—	·66	·54	—	23	23	23
Preston	„	·78	·66	·60	25	27	28	27
Leigh	„	·80	·67	·61	26	25	25	25
Warrington	„		·75	·63		24	26	25
Sculcoates	York, East Riding	·95	·80	·64	25	22	23	23
Edmonton	Middlesex (*ex.-met.*)	1·06	·89	·66	19	18	19	19
Prescot	Lancaster	1·14	·88	·67	23	23	23	23
Shrewsbury	Salop	·81	·74	·68	26	24	25	25
Barnsley	York, West Riding	—	·88	·68	—	24	25	24
Houghton-le-Spring	Durham	·91	·78	·68	20	21	24	22
Wakefield	York, West Riding	·85	·79	·69	23	23	23	23
Merthyr Tydfil	South Wales	1·74	1·23	·71	28	29	25	27
Redruth	Cornwall	·79	·73	·73	20	21	23	21
Keighley	York, West Riding	1·12	1·01	·77	21	23	24	23
Burnley	Lancaster	1·06	·91	·78	23	24	24	24
Thanet	Kent (*extra-met.*)	·94	·93	·80	19	21	20	20
Gloucester	Gloucester	1·09	·96	·84	24	21	21	22
South Stoneham	Hants	1·85	1·28	·92	18	17	18	18
Windsor	Berks	1·16	1·10	·95	20	20	20	20
Madeley	Salop	1·09	1·01	·97	23	21	22	22
Newcastle-under-Lyme	Stafford	1·33	1·18	·98	26	23	22	24
Saddleworth	York, West Riding	1·06	1·00	·98	22	24	23	23
Melksham	Wilts	·94	·99	1·00	22	22	22	22

TABLE **58.—Comparison** of a **Life Table** for **Males,** CONSTRUCTED by a SHORT METHOD, with the **English Life Table.** [The same data served for both Tables, and are given on pages xviii–xx of English Life Table.]

Age x.	l_x			d_x			MEAN AFTER-LIFETIME.		
	By English Life Table.	By Short Method.	Excess by Short Method.	By English Life Table.	By Short Method.	Excess by Short Method.	By English Life Table.	By Short Method.	Excess by Short Method.
0	511,745	511,745	—	141,387	141,387	—	39·91	40·00	·09
5	370,358	370,358	—	17,327	16,651	−676	49·71	49·82	·11
10	353,031	353,707	676	8,741	9,026	285	47·05	47·05	—
15	344,290	344,681	391	24,848	27,201	2,353	43·18	43·21	−·03
25	319,442	317,480	−1,962	30,592	30,183	−409	36·12	36·49	·37
35	288,850	287,297	−1,553	35,142	34,594	−548	29·40	29·80	·40
45	253,708	252,703	−1,005	44,169	42,703	−1,466	22·76	23·19	·43
55	209,539	210,000	461	58,785	57,254	−1,531	16·45	16·89	·44
65	150,754	152,746	1,992	74,977	74,518	−459	10·82	11·35	·53
75	75,777	78,228	2,451	58,900	60,393	1,493	6·49	7·39	·90
85	16,877	17,835	958	16,044	16,979	935	3·78	5·46	1·75
95	833	856	23	829	846	17	2·17	5·00	2·83
105	4	10	6	4	10	6	—	—	—

NOTE.—The above Table furnishes a comparison of the numbers living at the various ages, and the numbers dying in the intervals of those ages, also the mean after-lifetime, as calculated from the same data (1) by interpolation for each age according to the English Life Table, (2) by a short method in which the intervals of age are quinquennial up to age 15 and after that age decennial.

The dying in the first five years of life in both Tables were deduced from the Births registered during the 17 years 1838–54 (corrected for defective registration) and the registered Deaths in subsequent years of children, born during that period, occurring in the 1st, 2nd, 3rd, and 4th years of life. Then by the formula

$$\frac{1-\frac{1}{2}m}{1+\frac{1}{2}m}=\frac{2-m}{2+m}=\text{ the probability of living through one year}$$

this probability raised to the 5th power was applied to the survivors at age 5, and the rates at other ages in the same manner to survivors in each successive group of ages up to 15. After that age $\left(\frac{2-m}{2+m}\right)^{10}$ was the formula employed.

Take as an example age 15–25. The value of m for Males was ·00822 so $\frac{2-\cdot00822}{2+\cdot00822}=\frac{1\cdot99178}{2\cdot00822}$ and $\left(\frac{1\cdot99178}{2\cdot00822}\right)^{10}=\bar{1}\cdot9643000$, which added to $\lambda\, l_{15}=5\cdot5374169$ gives $\lambda\, l_{25}\, 5\cdot5017169$; and 317,480 is the corresponding number of l_{25}.

It will be seen that the Expectation of Life by each Table at the ages up to 15 is nearly the same; at ages 25 to 65 the differences range from ·37 to ·53 of a year, the Short Method giving an excess; and after that age there is a rapid increase in the excess of the mean after-lifetime by the Short Method Table.

TABLE 59.—ENGLAND AND WALES.—Average Annual Numbers of Males and Females Dying at the several Ages, to 1000 living at those Ages, of All Causes; of Certain Diseases; and of All Causes excluding each of those DISEASES; in the Ten Years 1861-70.

AGES.	ALL CAUSES. m_x		PHTHISIS. p_x		ALL ZYMOTIC DISEASES, Order 1. z_x		CANCER. c_x		ALL CAUSES excluding					
									Phthisis, $m_x - p_x$		Zymotic Dis., $m_x - z_x$		Cancer, $m_x - c_x$	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
ALL AGES	23·609	21·282	2·467	2·483	4·917	4·616	·244	·523	21·142	18·799	18·692	16·666	23·365	20·759
0—	73·162	63·430	·990	·947	22·355	21·754	·013	·013	72·172	62·483	50·807	41·676	73·149	63·417
5—	8·148	7·756	·431	·476	4·478	4·642	·008	·007	7·717	7·280	3·670	3·114	8·140	7·749
10—	4·460	4·484	·605	1·045	1·500	1·809	·008	·008	3·855	3·439	2·960	2·675	4·452	4·476
15—	6·161	6·632	2·188	3·110	1·313	1·421	·020	·017	3·973	3·512	4·848	5·201	6·141	6·605
20—	8·453	7·958	3·884	3·966	1·348	1·190	·027	·033	4·569	3·992	7·105	6·768	8·426	7·925
25—	9·897	9·685	4·092	4·378	1·217	1·115	·061	·163	5·805	5·307	8·680	8·570	9·836	9·522
35—	13·464	12·084	4·165	3·900	1·381	1·207	·206	·673	9·299	8·184	12·083	10·877	13·258	11·361
45—	19·165	15·555	3·860	2·850	1·690	1·393	·539	1·533	15·305	12·705	17·475	14·162	18·626	14·017
55—	32·995	27·773	3·297	2·065	2·543	2·134	1·208	2·300	29·698	25·708	30·452	25·639	31·787	25·473
65—	66·689	58·797	2·024	1·289	4·414	3·762	1·877	2·810	64·665	57·508	62·275	55·035	64·812	55·987
75—	146·576	134·427	·698	·475	7·608	6·758	2·291	2·844	145·878	133·952	138·973	127·669	144·285	131·583
85 & upwds.	313·570	283·642	·342	·260	11·350	9·883	2·327	2·713	313·228	283·382	302·220	273·759	311·243	280·929

The Table may be read thus:—At Ages 25—35 the annual number of Males dying to *One thousand* living at those Ages in the 10 Years 1861-70 was 9·897; had there occurred no deaths from Consumption the mortality would have been 5·805 per 1000; had there occurred no deaths from Order 1. of Zymotic Diseases or from Cancer, the numbers of Males dying to *One thousand* would have been 8·680 and 9·836 respectively.

TABLE 60. ENGLAND AND WALES.—Four Orders of Life Tables for Males (calculated from the Facts recorded during the Ten Years 1861-70), showing the EFFECT of the Exclusion of Deaths from (1) Zymotic Diseases, (2) Phthisis, and (3) Cancer, on the PROBABILITIES of LIVING from AGE to AGE.

Age x.	LIVING AT EACH AGE.				DYING IN EACH INTERVAL OF AGE.			
	To die of All Diseases.	Order 1. of Zymotic Diseases excluded.	Phthisis excluded.	Cancer excluded.	Of All Diseases.	Order 1. of Zymotic Diseases excluded.	Phthisis excluded.	Cancer excluded.
	l_x	${}_zl_x$	${}_pl_x$	${}_cl_x$	d_x	${}_zd_x$	${}_pd_x$	${}_cd_x$
0	510,622	510,622	510,622	510,622	142,805	99,272	140,977	142,787
5	367,817	411,350	369,645	367,835	14,688	7,479	13,997	14,670
10	353,129	403,871	355,648	353,165	7,788	5,964	6,798	7,772
15	345,341	397,937	348,850	345,393	10,474	9,533	6,857	10,442
20	334,867	388,404	341,993	334,951	13,854	13,566	7,725	13,825
25	321,013	374,838	334,268	321,126	30,258	31,164	18,868	30,094
35	290,755	343,674	315,400	291,032	36,617	39,107	28,010	36,142
45	254,138	304,567	287,390	254,890	44,313	48,846	40,798	43,327
55	209,825	255,721	246,592	211,563	58,961	67,183	63,367	57,618
65	150,844	188,538	183,225	153,945	73,435	87,442	87,279	73,444
75	77,409	101,146	95,946	80,501	59,583	76,002	73,695	61,531
85	17,826	25,144	22,251	18,970	17,037	23,948	21,305	18,147
95	789	1,196	946	823	780	1,187	937	814
105	9	9	9	9	9	9	9	9

The Table may be read thus:—Of 510,622 boys born alive, 321,013 attain the age of 25, of whom 30,258 die in the 10 years following. Exempted from attack by Miasmatic diseases 374,838 would survive to age 25, 31,164 dying in the next 10 years.

TABLE **61.**—ENGLAND AND WALES.—**Number** of **Men** at different PERIODS of AGE from 15 and upwards in the under-mentioned **Occupations** enumerated at the Census of **1871**, and the NUMBER at the SAME AGES and in the same OCCUPATIONS who **died** in the Year **1871.**

OCCUPATIONS.		MEN.—AGES.							
		15 Years and upwards.	15–25	25–35	35–45	45–55	55–65	65–75	75 & upwards.
ALL MEN aged 15 Years and upwards	Living in 1871	6,950,881	2,036,630	1,589,598	1,230,916	962,735	640,582	355,257	135,163
	Deaths in 1871	138,413	15,723	17,655	17,823	19,305	21,786	24,029	22,092
Tailors	Living in 1871	109,180	23,598	22,498	21,161	20,314	13,780	5,884	1,950
	Deaths in 1871	2,499	189	288	389	460	455	416	352
Shoemakers	Living in 1871	190,873	40,371	41,919	36,992	31,968	23,061	12,494	4,108
	Deaths in 1871	4,068	274	416	438	587	724	844	805
Farmers and Graziers	Living in 1871	225,569	5,679	28,473	43,744	52,521	47,208	32,919	15,030
	Deaths in 1871	6,946	65	268	416	667	1,135	1,855	2,540
Carpenters and Joiners	Living in 1871	202,449	59,338	50,920	34,950	26,124	18,415	9,248	3,454
	Deaths in 1871	3,510	319	490	433	449	596	613	610
Butchers	Living in 1871	70,326	22,716	16,632	12,171	8,949	5,737	3,130	991
	Deaths in 1871	1,498	120	180	264	227	211	268	223
Persons engaged in the Wool, Cotton, Flax, and Silk Manufactures, including Weavers not otherwise described	Living in 1871	328,535	110,546	71,774	55,944	43,800	28,087	14,132	4,252
	Deaths in 1871	6,041	710	697	605	813	1,065	1,154	997
Bakers and Confectioners	Living in 1871	59,469	18,708	13,702	10,595	8,085	5,127	2,515	737
	Deaths in 1871	1,062	100	137	153	174	202	195	121
Inn and Hotel Keepers; Licensed Victuallers and Publicans; and Beersellers	Living in 1871	74,267	8,135	13,965	20,162	18,871	11,808	5,066	1,360
	Deaths in 1871	2,538	35	235	463	580	562	384	279
Inn and Hotel Keepers; Licensed Victuallers and Publicans; and Beersellers; *including* Wine and Spirit Merchants	Living in 1871	84,846	5,446	16,732	22,341	20,536	12,752	5,562	1,477
	Deaths in 1871	2,775	57	277	511	610	592	417	311
Grocers	Living in 1871	85,602	27,213	18,199	14,201	11,871	8,259	4,505	1,354
	Deaths in 1871	1,323	161	203	145	174	212	246	182
Grocers and Shopkeepers (*including* Chandler's Shopkeeper and Branch undefined)	Living in 1871	107,453	30,203	22,523	19,061	16,256	11,332	6,219	1,836
	Deaths in 1871	1,715	180	239	197	231	296	322	248
Miners, viz., Coal, Iron, Copper, Tin, and Lead; and others connected with Mines	Living in 1871	335,129	120,859	87,542	60,868	37,906	19,186	7,143	1,623
	Deaths in 1871	5,275	942	843	721	788	853	711	417
Persons engaged in the Iron, Copper, Lead, and Tin Manufactures	Living in 1871	179,321	62,995	50,739	33,227	19,420	9,245	3,061	634
	Deaths in 1871	2,560	439	494	426	399	362	285	155
Labourers, &c., viz., Agricultural Labourers, Farm Servants, Farm Bailiffs, Shepherds, General Labourers, Railway Labourers, Navvies; Stone, Slate, and LimestoneQuarriers; Brickmakers, and other Workers in Stone and Clay	Living in 1871	1,471,417	407,859	295,127	256,009	218,459	159,254	96,084	36,025
	Deaths in 1871	29,643	2,410	3,056	3,196	3,734	4,708	6,184	6,405
Labourers, &c. as above, *including* Bricklayers and Masons	Living in 1871	1,664,649	462,465	344,398	292,966	244,664	175,619	106,045	38,492
	Deaths in 1871	33,223	2,695	3,568	3,759	4,371	5,260	6,728	6,842
Blacksmiths	Living in 1871	108,039	34,465	25,717	18,627	14,564	9,223	4,685	1,559
	Deaths in 1871	1,938	211	275	223	305	311	349	314

TABLE 62.—ENGLAND AND WALES. **Annual Mortality per Cent.** of **Men** at different Periods of Age from 15 and upwards in the under-mentioned **Occupations,** in the Year 1871.

OCCUPATIONS.	MEN.—AGES.						
	15–	25–	35–	45–	55–	65–	75 & upwards.
	ANNUAL MORTALITY PER CENT.						
ALL MEN aged 15 Years and upwards	·772	1·111	1·448	2·005	3·401	6·764	16·345
Tailors	·801	1·260	1·602	2·264	3·814	7·070	18·051
Shoemakers	·679	·992	1·186	1·886	3·187	6·755	19·596
Farmers and Graziers	1·145	·941	·951	1·270	2·405	5·635	16·900
Carpenters and Joiners	·538	·962	1·289	1·719	3·236	8·628	17·661
Butchers	·528	1·082	2·169	2·537	3·678	8·562	22·506
Persons engaged in the Wool, Cotton, Flax, and Silk Manufactures, including Weavers not otherwise described	·642	·971	1·081	1·856	3·792	8·166	23·448
Bakers and Confectioners	·535	1·000	1·444	2·152	3·940	7·758	16·418
Inn and Hotel Keepers; Licensed Victuallers and Publicans; and Beersellers	1·116	1·683	2·296	3·073	4·759	7·590	20·515
Inn and Hotel Keepers; Licensed Victuallers and Publicans; and Beersellers; *including* Wine and Spirit Merchants	1·047	1·656	2·287	2·970	4·642	7·497	21·056
Grocers	·592	1·115	1·021	1·406	2·567	5·461	13·442
Grocers and Shopkeepers (*including* Chandler's Shopkeeper and Branch undefined)	·596	1·061	1·062	1·421	2·630	5·178	13·508
Miners, viz., Coal, Iron, Copper, Tin, and Lead; and others connected with Mines	·779	·963	1·185	2·079	4·446	9·954	25·698
Persons engaged in the Iron, Copper, Tin, and Lead Manufactures	·697	·974	1·282	2·055	3·916	9·311	24·448
Labourers, &c., viz., Agricultural Labourers, Farm Servants, Farm Bailiffs, Shepherds, General Labourers, Railway Labourers, Navvies; Stone, Slate, and Limestone Quarriers; Brickmakers, and other Workers in Stone and Clay	·591	1·035	1·245	1·709	2·956	6·264	17·779
Labourers, &c. as above, *including* Bricklayers and Masons	·583	1·036	1·263	1·746	3·052	6·344	17·775
Blacksmiths	·612	1·069	1·197	2·094	3·872	7·449	18·927

TABLE 63.—ENGLAND AND WALES. **Number of Men** Aged 15 Years and upwards in 62 selected **Occupations living** at the Census of **1871**, plus twice the **Number living** at the Census of **1861**, the **Deaths** in the Three Years **1860, 1861,** and **1871**, and the **Annual Rate of Mortality per Cent.** at different Periods of LIFE.

Class.	Order.	OCCUPATIONS.		AGES. 15–	20–	The influence of Profession is most felt. 25–	35–	45–	55–	65–	75–
		MORTALITY PER CENT.	**Of All Classes**	·632	·859	·985	1·305	1·853	3·215	6·676	16·584
			OF THE 62 SELECTED OCCUPATIONS	·417	·831	·978	1·328	1·965	3·500	7·562	19·216
			OF THE REMAINING CLASSES	·778	·880	·993	1·290	1·786	3·070	6·315	15·768
I.	3	Clergyman	Years of Life	—	1,148	13,339	14,811	12,539	10,086	5,357	1,804
			Deaths	—	5	62	96	166	229	279	271
			Mortality per Cent.	—	·436	·465	·628	1·324	2·270	5·208	15·022
		Protestant Minister	Years of Life	—	1,313	6,002	5,754	5,144	3,902	2,097	732
			Deaths	—	13	35	42	48	96	118	120
			Mortality per Cent.	—	·990	·583	·730	·933	2·460	5·637	16·393
		Roman Catholic Priest	Years of Life	—	121	1,175	1,189	883	490	200	45
			Deaths	—	1	9	11	8	24	19	10
			Mortality per Cent.	—	·826	·766	·925	·962	4·898	9·500	22·222
		Barrister	Years of Life	—	223	2,525	2,902	2,126	1,472	610	164
			Deaths	—	—	12	17	20	36	25	16
			Mortality per Cent.	—	—	·475	·653	1·364	2·446	4·098	9·756
		Solicitor, Attorney	Years of Life	—	1,827	8,815	8,244	7,462	5,917	2,619	702
			Deaths	—	16	74	111	144	181	197	117
			Mortality per Cent.	—	·876	·890	1·346	1·930	3·059	7·522	16·667
		Physician, Surgeon	Years of Life	—	2,148	10,021	10,042	9,918	6,862	3,388	1,125
			Deaths	—	24	129	148	208	209	213	209
			Mortality per Cent.	—	1·117	1·287	1·474	2·047	3·046	6·287	18·414
		Chemist, Druggist	Years of Life	9,365	8,616	12,745	8,801	6,064	3,128	1,170	272
			Deaths	31	97	150	150	112	105	98	89
			Mortality per Cent.	·331	1·126	1·177	1·704	1·841	3·357	8·376	14·338
		Schoolmaster, Teacher, Professor, &c.	Years of Life	18,881	12,009	21,090	14,281	10,818	7,002	3,532	1,096
			Deaths	68	115	188	159	154	264	299	283
			Mortality per Cent.	·371	·958	·891	1·117	1·493	3·628	8·465	21·279
		Civil Engineer	Years of Life	1,181	2,078	2,965	2,612	1,812	812	297	72
			Deaths	2	12	28	40	19	18	16	19
			Mortality per Cent.	·169	·577	·944	1·531	1·049	2·217	5·387	26·389
II.	5	Domestic Servant	Years of Life	92,087	76,190	96,096	59,509	37,687	20,601	9,238	2,899
			Deaths	223	429	866	814	700	656	725	615
			Mortality per Cent.	·242	·563	·901	1·368	1·857	3·184	7·848	22·786
III.	6	Insurance Service and Commercial Clerk	Years of Life	54,219	46,770	49,522	24,769	15,086	8,946	3,884	844
			Deaths	206	377	681	430	378	316	310	151
			Mortality per Cent.	·380	·806	1·274	1·736	2·506	3·532	7·981	17·891
		Commercial Traveller	Years of Life	1,191	4,750	13,359	9,767	6,086	3,084	944	212
			Deaths	2	21	131	153	142	121	65	35
			Mortality per Cent.	·168	·508	·981	1·566	2·353	3·968	6·886	16·509
	7	Railway Engine Driver, Officer, Servant, &c.	Years of Life	22,756	36,057	64,445	37,875	17,849	6,406	1,678	258
			Deaths	162	428	787	567	334	260	119	58
			Mortality per Cent.	·712	1·173	1·221	1·497	2·151	4·059	7·092	20·543
		Coachman, Cabman, &c. (not Domestic)	Years of Life	8,272	9,352	28,005	24,448	15,877	7,620	2,774	792
			Deaths	10	102	341	495	469	360	277	159
			Mortality per Cent.	·306	1·091	1·218	2·025	2·954	4·724	9·986	20·076
		Carman, Carrier, Carter, Drayman	Years of Life	23,147	28,588	53,906	42,069	29,039	16,284	6,080	1,578
			Deaths	113	257	649	706	738	734	619	363
			Mortality per Cent.	·488	·899	1·204	1·682	2·541	4·521	10·181	23·004
		Bargeman, Waterman	Years of Life	11,696	11,812	20,307	17,043	12,824	8,294	4,177	1,488
			Deaths	70	112	233	327	307	343	394	312
			Mortality per Cent.	·599	·948	1·147	1·919	2·394	4·136	9·433	20·968
		Harbour, Dock Service, Labourer	Years of Life	7,058	11,132	25,187	22,436	15,908	7,782	2,569	899
			Deaths	25	95	281	357	397	331	222	109
			Mortality per Cent.	·354	·853	1·116	1·591	2·496	4·253	8·675	18·197
		Messenger, Porter, Errand Boy	Years of Life	49,501	15,718	26,417	22,729	17,497	10,996	4,785	1,001
			Deaths	157	121	293	347	425	425	378	174
			Mortality per Cent.	·317	·770	1·109	1·527	2·429	3·865	7·895	17·383
IV.	9	Horsekeeper, Groom, Jockey	Years of Life	18,055	17,399	27,988	21,298	14,352	8,276	3,298	803
			Deaths	60	156	365	430	412	381	259	171
			Mortality per Cent.	·332	·897	1·304	2·019	2·871	4·604	7·853	21·295
		Farrier, Veterinary Surgeon	Years of Life	1,695	2,519	4,821	4,000	3,210	2,246	1,175	378
			Deaths	6	14	70	65	79	72	74	77
			Mortality per Cent.	·354	·556	1·452	1·625	2·461	3·206	6·298	20·370
		Gamekeeper	Years of Life	1,845	2,545	7,847	8,739	6,226	3,274	1,298	562
			Deaths	5	18	40	62	55	85	116	128
			Mortality per Cent.	·372	·707	·510	·709	·883	2·596	8·327	21·708

TABLE 63. (*continued.*)—ENGLAND AND WALES. **Number of Men** Aged 15 Years and upwards in 62 selected **Occupations living** at the Census of **1871**, plus twice the **Number living** at the Census of **1861**, the **Deaths** in the Three Years **1860, 1861,** and **1871**, and the **Annual Rate of Mortality per Cent.** at different Periods of LIFE.

Class.	Order.	OCCUPATIONS.		AGES. The influence of Profession is most felt.							
				15–	20–	25–	35–	45–	55–	65–	75–
		MORTALITY PER CENT.	Of All Classes	·632	·859	·985	1·305	1·853	3·215	6·676	16·584
			OF THE 62 SELECTED OCCUPATIONS	·417	·831	·973	1·328	1·965	3·500	7·562	19·216
			OF THE REMAINING CLASSES	·778	·880	·998	1·290	1·786	3·070	6·315	15·768
V.	10	Bookseller, Publisher	Years of Life	2,687	2,597	5,074	4,411	3,272	2,088	962	281
			Deaths	12	22	39	43	59	50	72	38
			Mortality per Cent.	·455	·871	·769	·975	1·803	2·430	7·484	13·523
		Bookbinder	Years of Life	3,923	3,369	4,753	3,396	2,354	1,448	627	145
			Deaths	17	36	48	56	50	70	50	24
			Mortality per Cent.	·433	1·069	1·010	1·649	2·124	4·834	7·974	16·552
		Printer	Years of Life	24,673	17,226	23,216	14,796	8,623	4,310	1,881	365
			Deaths	117	187	248	247	209	171	142	75
			Mortality per Cent.	·474	1·079	1·068	1·669	2·424	3·968	7·549	20·548
		Musical Instrument Maker, Dealer	Years of Life	2,612	2,721	4,515	3,234	2,026	1,201	422	123
			Deaths	11	31	33	42	38	34	30	24
			Mortality per Cent.	·421	1·139	·731	1·299	1·876	2·831	7·109	18·045
		Watchmaker, Clockmaker	Years of Life	8,610	9,283	14,167	11,260	8,109	4,741	2,464	833
			Deaths	39	105	139	135	139	181	173	156
			Mortality per Cent.	·453	1·125	·981	1·199	1·714	3·818	7·021	18·727
		Gunsmith, Gun Manufacture	Years of Life	6,214	5,765	8,232	5,227	3,231	1,818	904	299
			Deaths	15	39	76	68	61	69	71	55
			Mortality per Cent.	·241	·676	·912	1·301	1·837	3·806	7·854	18·395
		Engine and Machine Maker and Millwright	Years of Life	43,062	48,607	72,281	47,572	27,518	12,517	4,156	1,085
			Deaths	192	417	666	605	496	460	347	221
			Mortality per Cent.	·446	·856	·922	1·272	1·797	3·675	8·349	20·369
		Tool, File, and Saw Maker, Dealer	Years of Life	7,737	7,389	11,448	8,760	5,335	2,722	1,109	252
			Deaths	35	64	130	131	143	137	88	52
			Mortality per Cent.	·452	·814	1·136	1·495	2·680	5·033	7·935	20·635
		Needle Manufacture	Years of Life	1,115	855	1,473	1,255	787	428	191	85
			Deaths	11	9	14	24	17	17	13	19
			Mortality per Cent.	·987	1·053	·950	1·912	2·160	3·972	6·806	22·353
		Coachmaker	Years of Life	9,120	9,174	14,398	10,904	8,486	4,583	1,704	857
			Deaths	32	56	135	129	207	178	137	82
			Mortality per Cent.	·351	·610	·938	1·183	2·439	3·927	8·040	22·969
		Wheelwright	Years of Life	14,243	13,560	18,851	15,094	12,847	8,205	4,774	1,938
			Deaths	37	100	130	151	210	225	318	334
			Mortality per Cent.	·260	·737	·708	1·000	1·701	2·742	6·661	17·234
		Shipbuilder, Shipwright	Years of Life	13,881	17,468	25,792	19,438	12,004	6,540	3,867	1,584
			Deaths	77	155	223	260	248	241	312	282
			Mortality per Cent.	·555	·887	·865	1·338	2·049	3·685	8·068	17·803
		Carpenter, Joiner	Years of Life	75,300	86,882	131,362	97,894	75,480	48,983	26,612	9,966
			Deaths	272	620	1,115	1,045	1,210	1,486	1,820	1,737
			Mortality per Cent.	·361	·714	·849	1·073	1·603	2·968	6·839	17·394
		Plumber, Painter, Glazier	Years of Life	35,595	38,989	66,517	49,384	32,151	15,777	5,679	1,177
			Deaths	129	278	628	818	898	768	528	214
			Mortality per Cent.	·362	·713	·944	1·656	2·778	4·868	9·297	18·182
		Carver, Gilder	Years of Life	3,051	2,841	4,488	3,097	1,961	1,119	483	114
			Deaths	17	23	41	49	51	86	41	21
			Mortality per Cent.	·557	·810	·915	1·582	2·601	3·217	8·489	18·421
		Manufacturing Chemist and Dye and Colour Manufacture	Years of Life	3,042	2,994	3,428	2,488	1,439	2,232	663	139
			Deaths	19	51	96	103	92	86	65	34
			Mortality per Cent.	·625	1·277	1·139	1·588	2·073	3·853	9·804	24·460
	11	Wool and Worsted Manufacture	Years of Life	57,539	45,491	74,001	61,502	47,824	32,783	17,064	5,668
			Deaths	290	460	632	635	807	1,068	1,305	1,183
			Mortality per Cent.	·504	·879	·854	1·032	1·687	3·258	7·648	20·872
		Silk Manufacture	Years of Life	13,889	11,120	21,175	20,581	18,509	12,770	6,151	1,746
			Deaths	95	99	186	227	279	349	390	265
			Mortality per Cent.	·710	·890	·878	1·103	1·507	2·733	6·340	15·178
		Cotton and Flax Manufacture	Years of Life	125,491	92,288	131,840	100,327	70,004	39,361	18,148	5,590
			Deaths	687	854	1,258	1,214	1,385	1,666	1,720	1,408
			Mortality per Cent.	·547	·924	·954	1·210	1·978	4·233	9·478	25·417
		Draper, Linendraper, Mercer	Years of Life	33,728	30,735	35,107	20,155	12,215	6,471	2,750	839
			Deaths	162	285	442	297	286	218	183	161
			Mortality per Cent.	·480	·927	1·259	1·474	1·932	3·369	6·655	19·421
		Hairdresser, Wig Maker	Years of Life	4,066	3,949	7,371	6,655	5,507	3,082	1,230	357
			Deaths	21	43	88	124	125	132	107	72
			Mortality per Cent.	·518	1·089	1·194	1·863	2·270	4·354	8·699	20·168

TABLE **63.** (*continued.*)—ENGLAND AND WALES. **Number** of **Men** Aged 15 Years and upwards in 62 selected **Occupations living** at the Census of **1871,** plus twice the **Number living** at the Census of **1861,** the **Deaths** in the Three Years **1860, 1861,** and **1871,** and the **Annual Rate of Mortality per Cent.** at different Periods of LIFE.

Class.	Order.	OCCUPATIONS.		AGES. The influence of Profession is most felt							
				15–	20–	25–	35–	45–	55–	65–	75–
		MORTALITY PER CENT.	**Of All Classes**	·632	·859	·985	1·305	1·853	3·215	6·676	16·584
			OF THE 62 SELECTED OCCUPATIONS	·417	·831	·973	1·328	1·965	3·500	7·562	19·216
			OF THE REMAINING CLASSES	·778	·880	·993	1·290	1·786	3·070	6·315	15·768
V. -cont.	11 cont.	Hatter, Hat Manufacture	Years of Life	3,794	3,777	6,840	6,279	5,903	4,205	2,453	806
			Deaths	17	42	68	100	141	180	193	179
			Mortality per Cent.	·456	1·112	·994	1·593	2·389	4·281	7·868	22·153
		Tailor	Years of Life	34,491	36,052	69,822	69,031	56,870	32,786	15,668	5,844
			Deaths	222	392	838	956	1,141	1,082	1,094	866
			Mortality per Cent.	·644	1·087	1·200	1·385	2·006	3·300	6·982	18·451
		Shoemaker	Years of Life	72,005	69,878	131,799	116,828	94,982	64,415	33,042	11,536
			Deaths	360	648	1,255	1,337	1,580	1,974	2,264	2,108
			Mortality per Cent.	·500	·927	·952	1·136	1·664	3·065	6·852	18·793
		Rope, Cord—Maker	Years of Life	4,228	3,264	5,919	5,077	3,889	2,822	1,577	635
			Deaths	17	20	45	56	79	118	124	112
			Mortality per Cent.	·403	·613	·760	1·103	2·031	4·181	7·863	17·638
	12	Butcher	Years of Life	31,889	29,525	46,354	35,275	25,795	16,851	8,452	2,741
			Deaths	74	174	466	611	679	631	695	551
			Mortality per Cent.	·232	·589	1·005	1·732	2·245	3·745	8·223	20·102
		Poulterer	Years of Life	782	843	1,525	1,271	1,131	801	400	139
			Deaths	3	9	21	34	35	33	33	25
			Mortality per Cent.	·384	1·068	1·377	2·480	3·095	4·120	8·250	17·986
		Fishmonger	Years of Life	2,881	3,334	7,356	7,032	5,157	2,804	1,280	325
			Deaths	10	25	98	122	117	104	109	59
			Mortality per Cent.	·347	·750	1·264	1·735	2·269	3·709	8·516	18·154
		Miller	Years of Life	11,938	12,580	22,178	17,406	12,481	8,158	4,069	1,404
			Deaths	41	89	160	209	230	320	354	276
			Mortality per Cent.	·343	·707	·721	1·201	1·843	3·923	8·657	19·658
		Baker	Years of Life	23,986	20,990	32,866	25,690	18,746	12,075	5,742	1,812
			Deaths	66	135	285	346	371	436	410	307
			Mortality per Cent.	·275	·643	·867	1·347	1·979	3·611	7·140	19·045
		Grocer	Years of Life	37,401	31,246	48,669	41,399	32,263	22,385	11,473	3,412
			Deaths	119	262	459	396	425	502	548	420
			Mortality per Cent.	·318	·839	·943	·957	1·348	2·243	4·776	12·866
		Tobacco, Cigar, Snuff Manufacture, Tobacconist	Years of Life	3,601	3,516	6,574	4,878	2,746	1,344	519	114
			Deaths	10	44	84	71	48	46	30	21
			Mortality per Cent.	·278	1·251	1·222	1·456	1·566	3·423	5·780	18·421
	13	Tanner and Currier	Years of Life	8,165	6,465	15,375	12,267	9,543	6,082	2,798	1,000
			Deaths	23	47	135	171	186	214	227	139
			Mortality per Cent.	·282	·555	·878	1·394	1·949	3·548	8·113	13·900
	14	Sawyer	Years of Life	6,570	9,625	21,497	20,468	15,632	9,472	4,554	1,875
			Deaths	23	55	151	213	241	293	338	404
			Mortality per Cent.	·350	·571	·702	1·041	1·542	3·093	7·422	21·547
		Paper Manufacture	Years of Life	3,897	3,270	5,275	4,021	2,811	1,998	1,031	383
			Deaths	12	33	45	51	43	54	73	77
			Mortality per Cent.	·308	1·009	·853	1·268	1·530	2·709	7·081	20·104
	15	Earthenware Manufacture	Years of Life	13,711	11,505	17,807	13,090	8,019	3,980	1,331	388
			Deaths	55	118	126	263	270	231	171	86
			Mortality per Cent.	·401	1·026	·708	2·009	3·367	5·804	12·847	23·970
		Glass Manufacture	Years of Life	8,052	7,163	10,682	7,204	4,629	2,328	831	178
			Deaths	24	48	126	110	100	104	108	50
			Mortality per Cent.	·298	·670	1·180	1·527	2·160	4·467	12·395	28·902
		Copper Manufacture and Coppersmith	Years of Life	2,441	2,458	4,099	3,023	2,231	1,161	461	115
			Deaths	11	25	45	43	45	63	51	15
			Mortality per Cent.	·451	1·005	1·098	1·423	2·017	5·426	11·063	13·043
		Brass Manufacture and Brazier	Years of Life	11,328	9,578	12,848	8,415	5,447	2,974	1,254	208
			Deaths	43	65	112	117	100	116	87	53
			Mortality per Cent.	·380	·679	·872	1·390	1·836	3·900	6·938	17·785
		Iron and Steel Manufacture	Years of Life	72,827	75,949	116,794	73,690	40,913	19,035	6,184	1,367
			Deaths	302	578	958	864	834	743	549	328
			Mortality per Cent.	·415	·761	·820	1·172	2·038	3·903	8·950	23·628
		Blacksmith	Years of Life	54,046	50,757	73,421	55,583	40,432	25,120	12,805	4,529
			Deaths	198	384	674	625	756	810	914	872
			Mortality per Cent.	·366	·757	·918	1·124	1·869	3·225	7·138	19·254

NOTE.—The Years of Life exposed to risk in the several Occupations during the three years 1860, 1861, and 1871 are calculated by adding twice the numbers living at the various groups of Ages at the Census of 1861 (*see* Vol. II. pp. xl–lvi) to the numbers living at the Census of 1871 (*see* Vol. III. pp. xxxv–xliii). The Deaths for the two years 1860-61 will be found in the Supplement to the Twenty-fifth Annual Report of the Registrar-General.

Table 64.—ENGLAND AND WALES. **Number** of **Men** Aged 15 Years and upwards in the under-mentioned **Occupations living** at the Census of **1871**, plus twice the **Number living** at the Census of **1861**; the **Number** in the same **Occupations who died** in the Three Years **1860, 1861,** and **1871**; and the **Annual Rate of Mortality per Cent.**, at different Periods of LIFE.

[*Some Trades are so closely allied that they are liable to be confounded either in the Census or in the Registration Classifications; to obviate errors from such causes the following occupations have been grouped.*

OCCUPATIONS.		MEN.—AGES. 15–	25–	35–	45–	55–	65–	75–
Years of Life among all Males aged 15 Years and upwards		5,672,910	4,381,552	3,518,592	2,653,747	1,769,654	963,189	373,243
Deaths		41,927	43,147	45,844	49,185	56,901	64,205	61,898
Mortality per Cent.		·739	·985	1·305	1·853	3·215	6·676	16·584
Farmers and Graziers (*See also Table 65.*)	Years of Life	16,597	86,519	139,016	156,787	142,089	94,921	43,554
	Deaths	181	765	1,252	1,964	3,894	5,420	7,386
	Mortality per Cent.	1·091	·884	·901	1·253	2·339	5·710	16·958
Persons engaged in the Wool, Cotton, Flax, and Silk Manufactures, including Weaver, not otherwise described	Years of Life	347,550	228,804	183,990	137,996	86,603	42,700	13,830
	Deaths	2,481	2,126	2,145	2,560	3,224	3,641	3,128
	Mortality per Cent.	·714	·929	1·166	1·855	3·723	8·527	22·617
Bakers and Confectioners	Years of Life	51,870	39,082	30,863	22,317	14,285	6,781	1,885
	Deaths	240	338	411	447	519	502	363
	Mortality per Cent.	·463	·866	1·332	2·003	3·633	7·458	19·257
Inn and Hotel Keepers, Licensed Victuallers and Publicans, and Beersellers, and Wine and Spirit Merchants	Years of Life	12,482	43,766	63,197	55,378	34,652	15,188	4,029
	Deaths	119	634	1,292	1,583	1,491	1,130	878
	Mortality per Cent.	·957	1·449	2·044	2·859	4·303	7·465	21·792
Grocers and Shopkeepers (including Chandler's Shopkeeper and Branch undefined)	Years of Life	72,353	54,408	48,175	38,490	27,206	14,307	4,272
	Deaths	406	515	467	582	632	687	572
	Mortality per Cent.	·561	·947	·969	1·382	2·323	4·802	13·390
Miners, viz., Coal, Iron, Copper, Tin, and Lead, and others connected with Mines	Years of Life	335,959	242,114	163,180	99,924	51,256	19,041	4,581
	Deaths	2,715	2,382	2,081	2,045	2,234	1,909	1,124
	Mortality per Cent.	·808	·984	1·245	2·047	4·359	10·026	24·807
Persons engaged in the Iron, Copper, and Tin and Lead Manufactures	Years of Life	154,317	120,289	76,433	48,268	20,371	6,667	1,514
	Deaths	934	1,009	912	990	808	615	364
	Mortality per Cent.	·605	·839	1·193	2·057	3·966	9·225	24·042
Labourers, &c., viz., Agricultural Labourers, Farm Servants, Farm Bailiffs, Shepherds, General Labourers, Railway Labourers, Navvies, Stone, Slate, and Limestone Quarriers, Brickmakers, and other Workers in Stone and Clay	Years of Life	1,205,087	891,969	767,189	631,505	460,334	269,658	101,225
	Deaths	6,185	7,782	8,286	9,268	12,586	16,341	18,480
	Mortality per Cent.	·513	·872	1·080	1·507	2·734	6·060	18·256
Labourers, &c., as above, *including* Bricklayers and Masons	Years of Life	1,342,677	1,022,606	867,500	694,594	505,265	291,163	107,742
	Deaths	6,896	9,017	9,723	10,902	14,207	17,982	19,679
	Mortality per Cent.	·514	·882	1·121	1·570	2·832	6·159	18·265
Royal Navy	Years of Life	124,261	69,701	21,059	5,982	2,082	—	—
	Deaths, 1861-65	1,433	963	357	117	31	—	—
	Mortality per Cent.	1·15	1·24	1·70	1·95	1·52	—	—

* In the *British Army* at home, at ages 15–40, the average annual rate of mortality in the six years 1866–71 was 1·05 per cent. among officers, and among non-commissioned and men 1·12 per cent. Abroad the rates were 1·26 and 1·83 per cent. respectively.
In the *British Navy*, at ages 15–40, the mortality of men was 0·82 per cent. in the year 1872 and 0·83 per cent. in 1873.

Table 65.—THE **Number** of "**Farmers**" and "**Farmers' Sons**" **living** at the Censuses of **1861** and **1871**, the **numbers** of those **who died**, and the **Annual Rate of Mortality per Cent.** at certain AGES during the Three Years **1860, 1861,** and **1871.**

——	MEN.—AGES. 15 Years and upwards.	15–	25–	35–	45–	55–	65–	75–
Living in 1861:								
Farmers	226,957	5,459	20,028	47,636	52,133	47,443	31,001	14,262
Farmers' Sons, &c.	92,321	57,513	22,811	7,966	2,761	865	309	97
Living in 1871:								
Farmers	225,569	5,679	20,473	43,744	52,531	47,208	32,919	15,030
Farmers' Sons, &c.	74,620	47,696	18,669	5,714	1,823	490	166	52
Dying in 1860-1 and 1871:								
Farmers	20,292	181	765	1,252	1,964	3,894	5,420	7,386
Farmers' Sons, &c.	1,113	686	282	88	40	14	2	1
Annual Rate of Mortality per Cent.:								
Farmers	—	1·091	·884	·901	1·253	2·339	5·710	16·958
Farmers and Farmers' Sons, &c.	—	·484	·694	·834	1·221	2·313	5·665	16·805

NOTE.—With Farmers are included Graziers, and with Farmers' "Sons" are included Farmers' "Grandson," "Brother," "Nephew,"—at Home.

TABLE **63.** (*continued.*)—ENGLAND AND WALES. **Number of Men** Aged 15 Years and upwards in 62 selected **Occupations living** at the Census of **1871,** plus twice the **Number living** at the Census of **1861,** the **Deaths** in the Three Years **1860, 1861,** and **1871,** and the **Annual Rate of Mortality per Cent.** at different Periods of LIFE.

Class.	Order.	OCCUPATIONS.	AGES. The influence of Profession is most felt	15–	20–	25–	35–	45–	55–	65–	75–
		MORTALITY PER CENT.	**Of All Classes**	·632	·859	·985	1·305	1·853	3·215	6·676	16·584
			OF THE 62 SELECTED OCCUPATIONS	·417	·881	·973	1·328	1·965	3·500	7·562	19·216
			OF THE REMAINING CLASSES	·778	·880	·993	1·290	1·786	3·070	6·315	15·768
V. *cont.*	11 *cont.*	Hatter, Hat Manufacture	Years of Life	3,794	3,777	6,840	6,279	5,903	4,205	2,453	808
			Deaths	17	42	68	100	141	180	198	179
			Mortality per Cent.	·456	1·112	·994	1·593	2·389	4·281	7·866	22·153
		Tailor	Years of Life	34,491	36,052	69,822	69,081	56,870	32,786	15,668	5,344
			Deaths	222	392	838	956	1,141	1,082	1,094	986
			Mortality per Cent.	·644	1·087	1·200	1·385	2·006	3·300	6·982	18·451
		Shoemaker	Years of Life	72,005	69,878	131,799	116,828	94,962	64,415	33,042	11,536
			Deaths	360	648	1,255	1,327	1,580	1,974	2,264	2,166
			Mortality per Cent.	·500	·927	·952	1·136	1·664	3·065	6·852	18·793
		Rope, Cord—Maker	Years of Life	4,223	3,264	5,919	5,077	3,889	2,822	1,577	635
			Deaths	17	20	45	56	79	118	124	112
			Mortality per Cent.	·403	·613	·760	1·103	2·031	4·181	7·863	17·638
	12	Butcher	Years of Life	31,589	29,525	46,354	35,275	25,796	16,851	8,452	2,741
			Deaths	74	174	466	611	579	631	695	551
			Mortality per Cent.	·232	·589	1·005	1·732	2·245	3·745	8·223	20·102
		Poulterer	Years of Life	782	843	1,525	1,371	1,131	801	400	139
			Deaths	3	9	21	34	35	33	33	25
			Mortality per Cent.	·384	1·068	1·377	2·480	3·095	4·120	8·250	17·986
		Fishmonger	Years of Life	2,881	3,334	7,356	7,032	5,157	2,804	1,280	325
			Deaths	10	25	98	122	117	104	109	59
			Mortality per Cent.	·347	·750	1·264	1·735	2·269	3·709	8·516	18·154
		Miller	Years of Life	11,938	12,580	22,178	17,406	12,481	8,158	4,089	1,404
			Deaths	41	89	169	209	230	320	354	276
			Mortality per Cent.	·343	·707	·721	1·201	1·843	3·923	8·657	19·658
		Baker	Years of Life	23,966	20,990	32,866	25,690	18,746	12,075	5,742	1,812
			Deaths	66	135	285	346	371	436	410	307
			Mortality per Cent.	·275	·643	·867	1·347	1·979	3·611	7·140	19·045
		Grocer	Years of Life	37,401	31,246	48,689	41,399	32,263	22,385	11,473	3,412
			Deaths	119	262	459	396	485	502	548	429
			Mortality per Cent.	·318	·839	·943	·957	1·348	2·243	4·776	12·866
		Tobacco, Cigar, Snuff Manufacture, Tobacconist	Years of Life	3,601	3,516	6,874	4,878	2,746	1,344	519	114
			Deaths	10	44	64	71	43	46	30	21
			Mortality per Cent.	·278	1·251	1·223	1·456	1·566	3·423	5·780	18·421
	13	Tanner and Currier	Years of Life	8,165	8,465	15,275	12,267	9,543	6,082	2,798	1,000
			Deaths	23	47	135	171	186	214	227	139
			Mortality per Cent.	·282	·555	·878	1·394	1·949	3·548	8·113	13·900
	14	Sawyer	Years of Life	6,570	9,625	21,497	20,468	15,632	9,472	4,554	1,875
			Deaths	23	55	151	213	241	293	338	404
			Mortality per Cent.	·350	·571	·702	1·041	1·542	3·093	7·422	21·547
		Paper Manufacture	Years of Life	3,897	3,270	5,275	4,021	2,811	1,998	1,031	383
			Deaths	12	33	45	51	43	54	73	77
			Mortality per Cent.	·308	1·009	·853	1·268	1·530	2·709	7·081	20·104
	15	Earthenware Manufacture	Years of Life	18,711	11,505	17,807	13,090	8,019	3,980	1,331	368
			Deaths	55	118	126	263	270	231	171	86
			Mortality per Cent.	·401	1·026	·708	2·009	3·367	5·804	12·847	23·370
		Glass Manufacture	Years of Life	8,052	7,163	10,682	7,204	4,629	2,338	831	173
			Deaths	24	48	126	110	100	104	108	50
			Mortality per Cent.	·298	·670	1·180	1·527	2·160	4·467	12·395	28·902
		Copper Manufacture and Coppersmith	Years of Life	2,441	2,468	4,099	3,023	2,231	1,161	461	115
			Deaths	11	25	45	43	45	63	51	15
			Mortality per Cent.	·451	1·005	1·098	1·422	2·017	5·426	11·063	13·043
		Brass Manufacture and Brazier	Years of Life	11,328	9,578	12,848	8,415	5,447	2,974	1,254	298
			Deaths	43	65	112	117	100	116	87	53
			Mortality per Cent.	·380	·679	·872	1·390	1·836	3·900	6·938	17·785
		Iron and Steel Manufacture	Years of Life	72,827	75,949	116,794	73,690	40,913	19,085	6,134	1,367
			Deaths	302	578	958	864	834	743	549	328
			Mortality per Cent.	·415	·761	·820	1·172	2·038	3·903	8·950	23·628
		Blacksmith	Years of Life	54,046	50,757	73,421	55,583	40,452	23,120	12,905	4,539
			Deaths	198	384	674	625	756	810	914	872
			Mortality per Cent.	·366	·757	·918	1·124	1·869	3·225	7·138	19·254

NOTE.—The Years of Life exposed to risk in the several Occupations during the three years 1860, 1861, and 1871 are calculated by adding twice the numbers living at the various groups of Ages at the Census of 1861 (*see* Vol. II. pp. xl–lvi) to the numbers living at the Census of 1871 (*see* Vol. III. pp. xxxv–xliii). The Deaths for the two years 1860-61 will be found in the Supplement to the Twenty-fifth Annual Report of the Registrar-General.

TABLE 64.—ENGLAND AND WALES. **Number** of **Men** Aged 15 Years and upwards in the under-mentioned **Occupations living** at the Census of **1871**, plus twice the **Number living** at the Census of **1861**; the **Number** in the same **Occupations who died** in the Three Years **1860, 1861,** and **1871**; and the **Annual Rate of Mortality per Cent.**, at different Periods of LIFE.

[*Some Trades are so closely allied that they are liable to be confounded either in the Census or in the Registration Classifications; to obviate errors from such causes the following occupations have been grouped.*

OCCUPATIONS.		MEN.—AGES.						
		15–	25–	35–	45–	55–	65–	75–
Years of Life among all Males aged 15 Years and upwards		5,672,910	4,881,552	3,513,592	2,653,747	1,769,654	963,189	373,243
Deaths		41,927	43,147	45,844	49,185	56,901	64,305	61,898
Mortality per Cent.		·739	·985	1·305	1·853	3·215	6·676	16·584
Farmers and Graziers (*See also Table 65.*)	Years of Life	16,597	86,519	139,016	156,787	142,069	94,921	43,554
	Deaths	181	765	1,252	1,964	3,324	5,420	7,386
	Mortality per Cent.	1·091	·884	·901	1·253	2·339	5·710	16·958
Persons engaged in the Wool, Cotton, Flax, and Silk Manufactures, including Weaver, not otherwise described	Years of Life	347,550	228,804	183,990	137,996	86,603	42,700	18,830
	Deaths	2,481	2,126	2,145	2,560	3,224	3,641	3,128
	Mortality per Cent.	·714	·929	1·166	1·855	3·723	8·527	22·617
Bakers and Confectioners	Years of Life	51,870	39,082	30,868	22,317	14,285	6,731	1,885
	Deaths	240	388	411	447	519	502	363
	Mortality per Cent.	·463	·866	1·332	2·003	3·633	7·458	19·257
Inn and Hotel Keepers, Licensed Victuallers and Publicans, and Beersellers, and Wine and Spirit Merchants	Years of Life	12,482	43,766	63,197	55,878	34,652	15,138	4,029
	Deaths	119	634	1,292	1,583	1,491	1,130	878
	Mortality per Cent.	·957	1·449	2·044	2·859	4·303	7·465	21·792
Grocers and Shopkeepers (including Chandler's Shopkeeper and Branch undefined)	Years of Life	72,353	54,406	48,175	38,490	27,206	14,307	4,272
	Deaths	406	515	467	582	632	687	572
	Mortality per Cent.	·561	·947	·969	1·382	2·323	4·802	13·390
Miners, viz., Coal, Iron, Copper, Tin, and Lead, and others connected with Mines	Years of Life	335,959	242,114	163,180	99,924	51,256	19,041	4,581
	Deaths	2,715	2,382	2,081	2,045	2,234	1,909	1,124
	Mortality per Cent.	·808	·984	1·245	2·047	4·359	10·026	24·807
Persons engaged in the Iron, Copper, and Tin and Lead Manufactures	Years of Life	154,317	120,289	76,423	43,268	20,371	6,667	1,514
	Deaths	934	1,009	912	890	808	615	364
	Mortality per Cent.	·605	·839	1·193	2·057	3·966	9·225	24·042
Labourers, &c., viz., Agricultural Labourers, Farm Servants, Farm Bailiffs, Shepherds, General Labourers, Railway Labourers, Navvies, Stone, Slate, and Limestone Quarriers, Brickmakers, and other Workers in Stone and Clay	Years of Life	1,205,087	891,969	767,139	621,505	460,334	269,658	101,225
	Deaths	6,185	7,782	8,286	9,368	12,586	16,341	18,480
	Mortality per Cent.	·513	·872	1·080	1·507	2·734	6·060	18·256
Labourers, &c., as above, *including* Bricklayers and Masons	Years of Life	1,342,677	1,022,606	867,500	694,594	505,265	291,163	107,742
	Deaths	6,898	9,017	9,723	10,902	14,307	17,982	19,679
	Mortality per Cent.	·514	·882	1·121	1·570	2·832	6·159	18·265
Royal Navy	Years of Life	124,361	69,701	21,059	5,982	2,082	—	—
	Deaths, 1861-65	1,433	863	357	117	31	—	—
	Mortality per Cent.	1·15	1·24	1·70	1·95	1·52	—	—

* In the *British Army* at home, at ages 15–40, the average annual rate of mortality in the six years 1866–71 was 1·05 per cent. among officers, and among non-commissioned and men 1·12 per cent. Abroad the rates were 1·26 and 1·83 per cent. respectively.
In the *British Navy*, at ages 15–40, the mortality of men was 0·82 per cent. in the year 1872 and 0·83 per cent. in 1873.

TABLE 65.—THE **Number** of "**Farmers**" and "**Farmers' Sons**" **living** at the Censuses of **1861** and **1871**, the **numbers** of those **who died**, and the **Annual Rate of Mortality per Cent.** at certain AGES during the Three Years **1860, 1861,** and **1871.**

—	MEN.—AGES.							
	15 Years and upwards.	15–	25–	35–	45–	55–	65–	75–
Living in 1861:								
Farmers	226,957	5,459	29,028	47,686	52,188	47,448	31,001	14,969
Farmers' Sons, &c.	92,321	57,513	22,811	7,966	2,761	865	309	97
Living in 1871:								
Farmers	225,569	5,679	28,478	43,744	52,571	47,208	33,919	15,030
Farmers' Sons, &c.	74,620	47,686	18,689	5,714	1,823	490	166	52
Dying in 1860-1 and 1871:								
Farmers	20,292	181	765	1,252	1,964	3,324	5,420	7,386
Farmers' Sons, &c.	1,113	686	282	88	40	14	2	1
Annual Rate of Mortality per Cent.:								
Farmers	—	1·091	·884	·901	1·253	2·339	5·710	16·958
Farmers and Farmers' Sons, &c.	—	·484	·694	·834	1·221	2·313	5·665	16·805

NOTE.—With Farmers are included Graziers, and with Farmers' "Sons" are included Farmers' "Grandson," "Brother," "Nephew,"—at Home.

MARRIAGE ACTS, 1753-1837.

"An Act for the better preventing of Clandestine Marriages" (26 Geo. 2, chap. 33), prepared by Lord Hardwicke, came into force in 1754, and established the necessity of resorting to a public and regular form of marriage in the parish church or chapel of one of the parties, after banns or by licence. By it the marriage of a minor after banns, where *dissent* had not been expressed, was lawful. But in the case of a marriage by licence, where either of the parties (not being a widow or widower) was a minor, without the *consent* of the parent or guardian of the minor the marriage was to be absolutely null and void. This was remedied in 1822 by Dr. Phillimore's Act.

By the Toleration Act of 1st William and Mary dissenters had been formally recognised, and their marriages according to their own forms and usages were, up to the passing of Lord Hardwicke's Act, treated as marriages *de facto*. This Act gave the Church the sole authority to celebrate legal marriages in England, which it continued to enjoy until the year 1837.

A further Act was passed in 1823, by which the penalty of nullity was confined to the case of persons wilfully evading the legal forms of publication or of celebration.

Relief was afforded to dissenters by Lord John Russell's Bill of 1836, which came into force in 1837, by which they were enabled to celebrate their marriages according to their own rites in their own places of worship, on condition that a Registrar of Marriages should be present at the ceremony.

And those, too, who desired to contract marriage without religious ceremony were given the option of the Civil form of marriage at the District Register Office. (See Hammick's Law of Marriages, pp. 12–17.)

TABLE 66.—**Annual Increase of Marriages per cent. in England and Wales** in successive periods of Five Years, **1756–1870.**

QUIN-QUENNIADS.	TOTAL MARRIAGES in 5 Years.	Mean Annual Number of Marriages.	Increase per cent. per annum.
1756–60	263,329	52,666	
			2·60
1761–65	299,414	59,883	(Decrease.)
			— ·28
1766–70	295,216	59,043	
			·57
1771–75	303,703	60,741	
			1·13
1776–80	321,189	64,238	
			·76
1781–85	333,570	*66,714	
			1·36
1786–90	356,816	71,363	
			·23
1791–95	361,025	72,205	
			·76
1796–1800	374,989	74,998	
			2·17
1801–05	417,387	*83,477	(Decrease.)
			— ·15
1806–10	414,764	82,953	
			1·42
1811–15	445,063	89,013	
			·90
1816–20	465,363	93,073	
			2·12
1821–25	516,815	103,363	
			·70
1826–30	535,280	107,056	
			·82
1831–35	557,517	111,503	
			1·34
1836–40	596,009	119,202	
			1·47
1841–45	641,131	128,226	
			2·19
1846–50	714,866	142,873	
			2·02
1851–55	789,348	157,870	
			·58
1856–60	812,383	162,477	
			1·31
1861–65	867,107	173,421	
			·80
1866–70	902,517	180,503	

* In the Census Report of 1831 the medium average for the 5 years 1781–85 is given as 66,722, that for the 5 years 1801–5 as 83,465.

NOTE.—The number of Baptisms increased during the various quinquenniads from 1801 at the following rates per cent. per annum:—From 1801–5 to 1806–10, 1·33; from 1806–10 to 1811–15, 1·28; from 1811–15 to 1816–20, 1·05; from 1816–20 to 1821–25, 2·00; from 1821–25 to 1826–30, 0·70.

TABLE 67.—Annual Increase of Marriages per cent. in England and Wales in various Decenniads from 1796 to 1870; also the Annual Increase of Population per cent., 1801–1871.

DECENNIADS.	MARRIAGES in 10 Years.	Mean Annual Number of Marriages.	Annual Increase of Marriages per cent.	Annual Increase of Population per cent.
1796—1805	792,376	79,238		
			0·82	1·32 (1801–11)
1806—1815	859,827	85,983		
			1·34	1·67 (1811–21)
1816—1825	982,178	98,218		
			1·07	1·48 (1821–31)
1826—1835	1,092,797	109,280		
			1·25	1·36 (1831–41)
1836—1845	1,237,140	123,714		
			1·97	1·22 (1841–51)
1846—1855	1,503,714	150,371		
			1·11	1·13 (1851–61)
1856—1865	1,679,490	167,949		
(Quinquenniad.)			1·45	1·25 (1861–71)
1866—1870	902,517	180,503		

TABLE 68.—Estimated Decennial Numbers of Births in England and Wales since the Year 1771; the Numbers of Persons ENUMERATED in 1871 at DIFFERENT AGES; and the Numbers that died or emigrated out of the said BIRTHS; also the Proportions of the TWO SERIES of NUMBERS.

AGES of POPULATION enumerated in 1871 (Survivors).	YEARS.	ESTIMATED BIRTHS in ENGLAND and WALES.	SURVIVORS (+Immigrants) enumerated in 1871.	DIED or EMIGRATED (−Immigrants) during the Interval.	PROPORTION per 10,000.	
					Survivors + Immigrants $= 10000 \times \frac{S}{b} = s \times 10000.$	Gone away by Death or Emigration $\left(\frac{d+e-i}{b}\right) \times 10000.$
0—10	1861—1870	7,636,233	5,795,746	1,840,487	7589·8	2410·2
10—20	1851—1860	6,664,884	4,637,886	2,026,998	6958·7	3041·3
20—30	1841—1850	5,869,098	3,870,700	1,998,398	6595·1	3404·9
30—40	1831—1840	5,289,298	2,949,061	2,340,237	5575·5	4424·5
40—50	1821—1830	4,796,224	2,299,748	2,496,476	4792·9	5207·1
50—60	1811—1820	4,424,690	1,670,570	2,754,120	3775·6	6224·4
60—70	1801—1810	3,675,247	1,067,537	2,607,710	2904·7	7095·3
70—80	1791—1800	2,988,439	507,522	2,480,917	1698·3	8301·7
80—90	1781—1790	2,641,371	119,789	2,521,582	453·5	9546·5
90—100	1771—1780	2,379,329	7,991	2,371,338	33·6	9966·4

Let $S = b - (d + e - i)$ = survivors + immigrants enumerated in 1871.

Births = b
Deaths = d
Immigrants = i
Emigrants = e

$$\frac{S}{b} = s = \frac{b - (d + e - i)}{b} = \text{ratio of survivors to Births.}$$

$$1 - s = \left(\frac{d + e - i}{b}\right)$$

The Births in five cases were estimated by the Life Table from the numbers enumerated under 10 years of age at the censuses of 1821, 1841, 1851, 1861, and 1871. Thus, putting P_{0-10} as the population under 10 and b for the corresponding Births, we have $b = \frac{10\, l_0}{Q_0 - Q_{10}} \times P_{0-10}$

As the ages were not enumerated in 1831, instead of calculating the Births for 1821–30 from the population at ages under 10 they were deduced from the population at the ages 10—20 enumerated in 1841: the step back from 10—20 to 0—10 being deduced from the proportion living at those decenniads in the other enumerations. *See* Census Report, vol. 4, pp. 54–57.

TABLE **69.**—The **English Population** in **1871** at each QUINQUENNIAD; contrasted with what it would have been had the **Births** remained **constant** and there had been no **Emigration** since the Year **1771.**

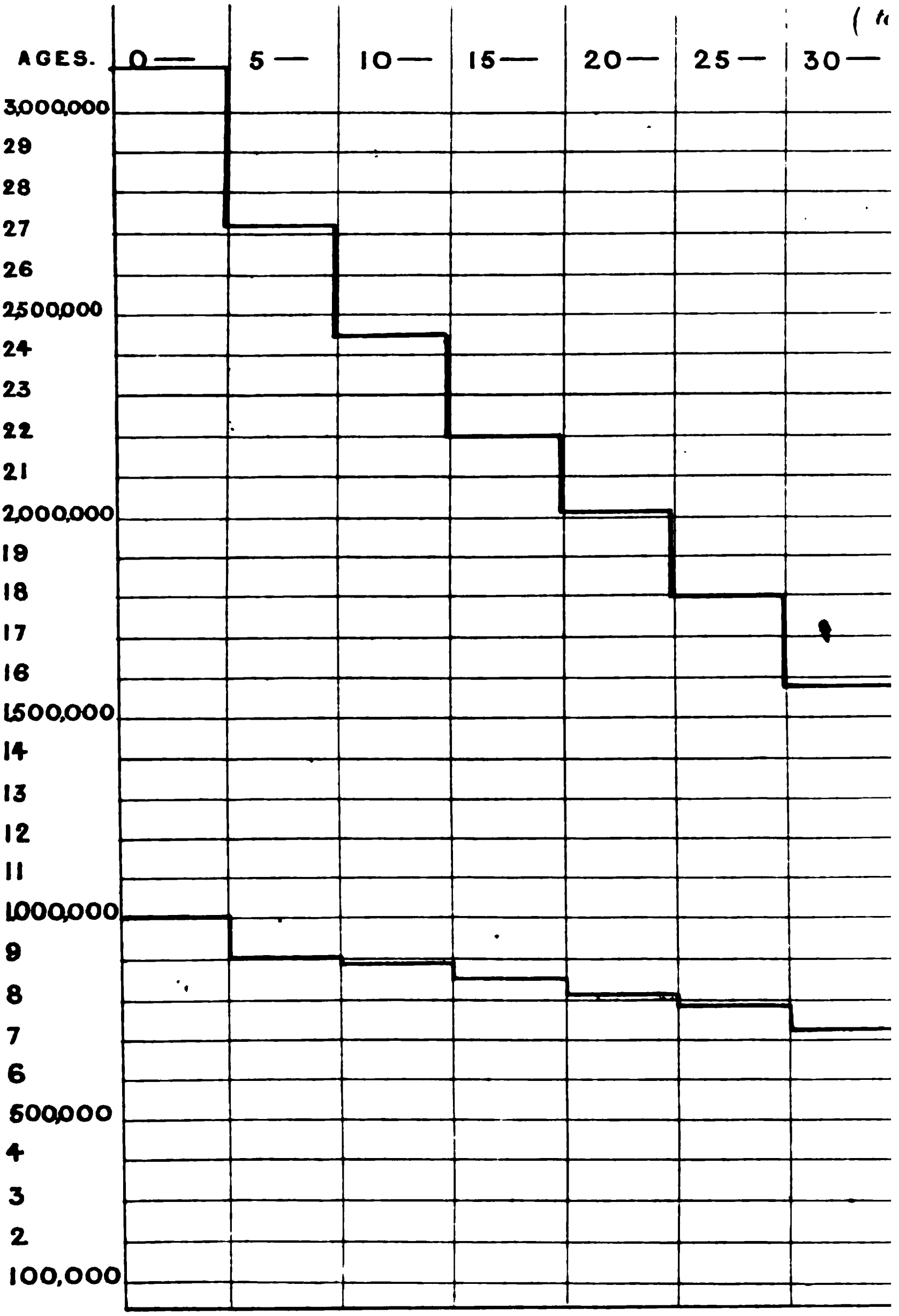
AGES.	AGES of the POPULATION of ENGLAND in the middle of 1871.	AGES of the POPULATION of ENGLAND if the NUMBER of ANNUAL BIRTHS had been and remained the same (253,320)* in and since the year 1771.	ADDITION to the POPULATION due to EXCESS of BIRTHS since the year 1770.
ALL AGES -	22,782,812	10,350,195	12,432,617
0— - -	3,080,814	1,014,348	2,066,466
5— - -	2,714,932	908,040	1,806,892
10— - -	2,431,768	878,061	1,553,707
15— - -	2,189,629	854,254	1,335,375
20— - -	2,008,543	821,464	1,187,079
25— - -	1,787,611	784,031	1,003,580
30— - -	1,563,339	744,739	818,600
35— - -	1,370,315	703,535	666,780
40— - -	1,208,826	659,862	548,964
45— - -	1,080,645	612,881	467,764
50— - -	923,290	561,407	361,883
55— - -	748,703	501,828	246,875
60— - -	596,315	431,040	165,275
65— - -	453,495	347,428	106,067
70— - -	314,093	252,874	61,219
75— - -	185,686	157,697	27,989
80— - -	86,984	78,882	8,102
85— - -	28,907	28,907	—
90— - -	7,506	7,506	—
95— - -	1,282	1,282	—
100 and upwards	127	127	—

* This is an estimated number of births in that year.

EN

DIAGRAM OF THE POPULATION

(t



The Diagram represents by its area enclosed by the

at the Census of 1871. The area enclosed by the red-l

253,320 a year as in 1771, instead of increasing as t

living who were under the age of 5 years, while in

age would be <u>One Million only</u>.

Table 70.—Two Populations equal in Numbers but differing in Constitution as to Age.

Ages.	Proportional Numbers of Population at each Quinquenniad out of a Total of 10 millions living at All Ages.		Excess of Census Numbers over Life Table Numbers.	Excess of Life Table Numbers over Census Numbers.	Proportion of Census Numbers to Life Table Numbers (of *a* to *b*).
	Population according to Census (graduated Table).	Population according to Life Table.			
Columns -	*a*	*b*	$c = a - b.$	$d = b - a.$	*e*
All Ages -	10,000,000	10,000,000	—		—
0—	1,352,254	980,028	372,226	—	1·380
5—	1,191,658	877,316	314,342	—	1·358
10—	1,067,370	848,352	219,018	—	1·258
15—	961,088	825,351	135,737	—	1·164
20—	881,604	793,670	87,934	—	1·111
25—	784,631	757,503	27,128	—	1·036
30—	686,192	719,541	—	33,349	·954
35—	601,469	679,732	—	78,263	·885
40—	530,587	637,536	—	106,949	·832
45—	474,325	592,145	—	117,820	·801
50—	405,257	542,411	—	137,154	·747
55—	328,626	484,849	—	156,223	·678
60—	261,739	416,456	—	154,717	·628
65—	199,051	335,673	—	136,622	·593
70—	137,864	244,318	—	106,454	·564
75—	81,503	152,361	—	70,858	·535
80—	38,180	76,213	—	38,033	·501
85—	12,688	28,265	—	15,577	·449
90—	3,295	7,097	—	3,802	·464
95—	563	1,088	—	525	·517
100 and upwds.	56	95	—	39	·589

Table 70.—Two Populations equal in Numbers but differing in Consti as to Age.

Ages	Proportional Numbers of Population at each Quinquennial out of a Total of 10 millions living at All Ages.		Excess of Census Numbers over Life Table Numbers.	Excess of Life Table Numbers over Census Numbers.	Propor Cen Numb Life Num (of a
	Population according to Census (graduated Table).	Population according to Life Table.			
Columns	*a*	*b*	$c = a - b$.	$d = b - a$.	*e*
All Ages	10,000,000	10,000,000	—		—
0–	1,352,254	980,028	372,226	—	1·
5–	1,191,658	877,316	314,342	—	1·
10–	1,067,370	848,352	219,018	—	1·
15–	961,088	825,351	135,737	—	1·
20–	881,604	793,670	87,934	—	1·
25–	784,631	757,503	27,128	—	1·
30–	686,192	719,541	—	33,349	·
35–	601,469	679,732	—	78,263	·
40–	530,587	637,536	—	106,949	·
45–	474,325	592,145	—	117,820	·
50–	405,257	542,411	—	137,154	·
55–	328,626	484,849	—	156,223	·
60–	261,739	416,456	—	154,717	·
65–	199,051	335,673	—	136,622	·
70–	137,864	244,318	—	106,454	·
75–	81,503	152,361	—	70,858	·
80–	38,180	76,213	—	38,033	·
85–	12,688	28,265	—	15,577	·
90–	3,295	7,097	—	3,802	·
95–	563	1,088	—	525	·
100 and upwds.	56	95	—	39	·

TABLE 71.—Comparison of the Deaths under the same Rates of Mortality in Two Populations differently constituted as regards Age.

Note.—The rates of Mortality are deduced from the English Life Table No. 3. by the formula $\frac{l_{x\ |5}}{Q_{x\ |5}} = m$

AGES.	MORTALITY per cent. at each Quinquenniad.	DEATHS at the corresponding AGES, mortality being taken at the same rate as in the English Life Table.		EXCESS of Deaths in Column *b*.	DEFECT of Deaths in Column *b*.
		Deaths deduced from Column *a* of Table 70.	Deaths deduced from Column *b* of Table 70.		
Columns -	*a*	*b*	*c*	$d = b - c$	$e = c - b$
ALL AGES -	—	223,616	244,756	Defect -	21,140
0—	6·573	88,884	64,417	24,467	—
5—	·957	11,404	8,396	3,008	—
10—	·518	5,529	4,394	1,135	—
15—	·647	6,218	5,340	878	—
20—	·885	7,802	7,024	778	—
25—	·980	7,689	7,424	265	—
30—	1·079	7,404	7,764	—	360
35—	1·203	7,236	8,177	—	941
40—	1·369	7,264	8,728	—	1,464
45—	1·597	7,575	9,457	—	1,882
50—	1·948	7,894	10,566	—	2,672
55—	2·539	8,508	12,553	—	4,045
60—	3·573	9,352	14,880	—	5,528
65—	5·181	10,313	17,391	—	7,078
70—	7·699	10,614	18,810	—	8,196
75—	11·404	9,295	17,375	—	8,080
80—	16·560	6,323	12,621	—	6,298
85—	23·428	2,973	6,622	—	3,649
90—	32·267	1,063	2,290	—	1,227
95—	43·420	244	472	—	228
100 & upwards	57·623	32	55	—	23

Table 72.—Enumerated Population of the United States of America at the several Decennial Censuses.

Dates of Enumeration.	Population.	Increase in 10 Years.	Decennial Increase per cent.	Decenniads.
1790	3,929,214			
		1,379,269	35·10	1790-1800
1800	5,308,483			
		1,931,398	36·38	1800-1810
1810	7,239,881			
		2,393,941	33·07	1810-1820
1820	9,633,822			
		3,232,198	33·55	1820-1830
1830	12,866,020			
		4,204,220	32·68	1830-1840
1840	17,070,240			
		6,121,636	35·86	1840-1850
1850	23,191,876			
		8,251,445	35·58	1850-1860
1860	31,443,321			
		7,115,050	22·63	1860-1870
1870	38,558,371			

Note.—The increase of Population in the 70 Years 1790 to 1860 was at the rate of 3·02 per cent. per annum, so $r = 1{\cdot}0302$; and at this rate the Population doubles itself in 23·30 years.

The Population increased 8-fold in the 70 years 1790-1860; and carrying the rate backwards it makes the Population of 1720 about 491,000; of 1650 no more than 61,356; of 1580 about 7,667.

ENGLAND.—DEATHS of MALES of different OCCUPATIONS registered in the Year 1871—continued.

OCCUPATIONS.	AGES OF MALES.											
	TOTAL.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65— and upwds.
7.—*cont.*												
4. Carriers on Seas and Rivers.												
Shipowner	64	–	64	–	–	–	–	1	5	17	30	37
Steam Navigation Service	158	1	155	–	1	–	15	35	32	32	13	6
Ship Steward, Cook	109	8	101	–	–	6	14	26	19	20	9	3
Seaman (Merchant Service)	2239	121	2118	–	6	115	397	422	386	338	224	126
Pilot	95	1	94	–	–	1	3	7	17	30	16	20
Boatman on Seas	45	2	43	–	–	2	3	5	5	6	12	5
Harbour, Dock Service, Labourer	708	13	695	–	1	11	26	59	240	160	155	91
Wharfinger	29	–	29	–	–	–	–	2	7	5	7	5
Others	76	5	71	–	–	5	7	13	13	11	12	6
5. Engaged in Storage.												
Warehouseman	490	27	459	–	–	27	45	94	85	90	65	48
Meter, Weigher	6	–	6	–	–	–	–	–	1	–	1	4
6. Messengers and Porters.												
Messenger, Porter, Errand Boy	985	90	895	–	15	75	83	142	138	139	173	144
Cotton Porter	70	1	69	–	–	1	5	7	15	16	13	13
Telegraph Company Service	50	19	31	–	1	18	13	21	4	2	1	1
Others engaged in *Messages*	9	–	9	–	–	–	–	–	–	2	3	3
XV.—AGRICULTURAL CLASS.												
8.—*Persons possessing or working the* LAND, *and engaged in growing* GRAIN, FRUITS, GRASSES, ANIMALS, *and other Products.*												
1. In Fields and Pastures.												
	300	–	300	–	–	–	–	6	17	34	55	101
	6946	7	6939	–	–	7	39	395	416	997	1135	1874
on, Nephew	563	306	257	99	71	136	120	90	32	14	4	1
	276	3	273	–	–	3	6	7	14	46	81	73
	13908	459	13449	45	61	351	857	982	1041	1343	2014	3609
	276	5	271	–	–	5	6	12	19	28	44	74
	318	61	185	–	3	55	37	30	18	15	21	21
	100	2	98	–	–	2	1	6	7	15	14	38
	30	1	29	–	–	1	–	5	5	8	2	8
or, Attendant	37	1	36	–	–	1	1	3	9	4	1	4
	15	1	14	–	–	1	3	2	1	1	3	3
2. In Woods.												
Woodman	164	3	161	–	–	3	5	10	16	14	27	36
3. In Gardens.												
Nurseryman, Seedsman, Florist	66	5	61	–	1	4	10	7	6	13	16	24
Gardener	1948	22	1927	–	2	20	44	140	166	348	859	403
Others engaged in *Horticulture*	4	–	4	–	–	–	–	–	–	1	1	2
9.—*1. Persons engaged about* ANIMALS.												
Horse Proprietor, Dealer	64	–	64	–	–	–	–	12	9	13	12	11
Horse Breaker	39	–	39	–	–	–	3	4	12	13	7	10
Horsekeeper, Groom, Jockey	911	24	787	–	4	20	73	166	143	144	113	97
Farrier, Veterinary Surgeon	181	4	177	–	–	4	6	22	25	21	28	24
Cattle, Sheep, Pig, Salesman	167	2	165	–	–	2	6	19	21	28	29	40
Drover	135	–	135	–	–	–	4	11	28	15	28	28
Gamekeeper	199	3	195	–	–	3	8	17	19	23	48	57
Vermin Destroyer	35	–	35	–	–	–	–	–	3	4	9	19
Fisherman	384	22	362	–	3	19	31	31	53	49	36	30
Others engaged about *Animals*	43	1	42	–	–	1	2	4	9	7	7	7
V.—INDUSTRIAL CLASS.												
10.—*Persons engaged in* ART *and* MECHANIC *Productions, in which matters of various kinds are employed in combination.*												
1. In Books.												
Bookseller, Publisher	107	5	102	–	–	5	9	12	16	14	17	29
Bookbinder	123	5	118	–	1	4	11	17	20	22	16	27
Printer	648	61	585	–	4	57	82	114	91	85	65	87
Newspaper Agent, News-room Keeper	69	3	66	–	1	2	2	6	11	8	10	15
Others engaged in *Publications*	14	–	14	–	–	–	1	1	2	4	1	3
2. In Musical Instruments.												
Musical Instrument Maker, Dealer	102	5	97	–	1	4	15	16	20	11	11	19
Others	10	1	9	–	–	1	1	1	1	2	2	–
3. In Prints and Pictures.												
Lithographer, Lithographic Printer	42	6	36	–	–	6	7	12	7	3	1	1
Others	46	2	44	–	–	2	–	4	5	10	11	8
4. Carving and Figures.												
Wood-carver	51	–	51	–	–	–	3	15	6	4	7	11
Others	34	–	34	–	–	–	1	9	4	6	6	2
5. In Tackle for Sports and Games.												
Toy Maker, Dealer	45	2	43	–	1	1	3	2	4	3	12	3
Others	31	1	30	–	–	1	1	3	–	4	1	7

ENGLAND.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

OCCUPATIONS.	AGES OF MALES.											
	Total.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75 and upwds.
11.—*cont.*													
2. In Silk.													
Silk, Satin, Manufacture	411	16	395	1	-	15	10	35	46	69	91	99	73
Silk Dyer, Printer	18	1	17	-	-	1	1	-	3	3	3	6	1
Silk Merchant, Dealer	21	-	21	-	-	-	3	1	-	6	4	6	1
Ribbon Manufacture	70	3	67	-	-	3	1	7	11	6	13	17	11
Others	8	1	7	-	-	1	1	1	4	1	-	-	-
3. In Cotton and Flax.													
	191	3	188	-	-	5	13	11	16	26	39	42	6
	140	7	133	-	1	6	13	17	16	14	24	26	12
	5	-	5	-	-	-	1	-	-	-	-	-	1
	15	-	15	-	-	-	-	2	-	2	5	3	3
	2471	219	2252	7	40	172	207	230	227	254	422	394	299
ss, Dealer	23	-	23	-	-	-	1	4	2	3	4	5	3
	74	3	71	-	-	3	1	10	10	13	13	19	2
	197	8	189	-	4	4	9	22	12	26	25	46	31
	76	3	73	-	-	5	5	10	10	9	10	14	6
	14	-	14	-	-	-	-	-	3	4	3	1	4
4. In Mixed Materials.													
Weaver (not otherwise described)	434	17	417	-	-	14	17	25	29	51	62	91	59
Bleacher (not otherwise described)	60	5	55	-	-	5	4	7	9	9	4	12	10
Manchester Warehouseman	42	2	40	-	-	2	3	6	14	4	3	1	1
Draper, Linen Draper, Mercer	812	74	738	-	1	75	108	174	117	109	90	72	49
Fancy Goods Manufacturer, Dealer	63	1	62	-	-	1	3	7	5	6	17	16	7
Trimming Maker, Dealer	23	2	21	-	-	2	-	3	1	5	7	2	1
Others	6	-	6	-	-	-	-	-	-	1	1	4	-
5. In Dress.													
Hairdresser, Wig Maker	265	8	257	-	-	8	16	38	51	63	51	45	25
Hatter, Hat Manufacture	512	8	504	-	-	8	13	28	39	54	63	85	71
Straw Plait Manufacture	34	1	33	-	-	1	4	5	4	1	9	8	1
Furrier, Skinner	60	4	56	-	-	4	1	13	9	13	11	5	1
Tailor	2504	73	2431	-	5	68	121	288	330	469	455	416	279
Milliner	21	-	21	-	-	-	2	2	5	4	2	1	1
Stay Maker, Ladies' Outfitter	19	1	18	-	-	1	1	2	3	3	3	1	1
Hosiery Manufacture	338	8	330	-	1	7	20	26	43	73	73	124	63
Hosier, Haberdasher	80	8	72	-	-	8	5	13	11	6	5	7	4
Glover (leather)	43	1	42	-	-	1	3	2	3	10	7	6	2
Glove Maker (all except leather)	20	-	20	-	-	-	1	1	3	5	4	3	3
Shoemaker, Bootmaker	4091	85	4006	-	8	32	103	416	433	587	734	844	539
Patten, Clog Maker	26	-	26	-	-	-	4	6	3	4	3	4	2
Button Maker	23	-	23	-	-	-	1	3	13	19	17	4	1
Umbrella, Parasol, Stick, Maker	69	1	68	-	-	1	7	10	11	7	10	13	6
Laundry Keeper	36	1	35	-	-	1	3	3	5	6	5	10	2
Others providing *Dress*	54	7	47	-	-	7	3	5	11	5	6	7	2
6. Hemp and other Fibrous Materials.													
Mat Maker, Seller	24	-	24	-	-	-	3	3	3	7	6	4	1
Hemp Manufacture	11	1	10	-	-	1	-	1	1	3	-	3	1
Jute Manufacture	8	3	5	-	-	3	-	-	-	-	1	1	-
Rope, Cord, Maker	207	7	200	-	-	7	5	18	20	37	44	41	28
Canvas, Sailcloth, Manufacture, Dealer	20	-	20	-	-	-	2	-	-	1	5	6	6
Sacking, Sack, Bag, Maker, Dealer	19	-	19	-	-	-	-	1	2	4	6	1	4
Others	8	-	8	-	-	-	-	1	1	1	1	3	1
12.—*Persons working and dealing in* Food and Drinks.													
1. In Animal Food.													
Cowkeeper, Milkseller	376	9	367	-	2	7	13	24	30	37	70	86	98
Cheesemonger	57	4	53	-	1	3	5	15	9	16	15	12	2
Butcher, Meat Salesman	1460	21	1439	-	-	21	29	120	264	327	311	263	124
Provision Curer, Dealer	221	1	220	-	-	1	10	16	34	44	52	37	26
Poulterer, Game Dealer	91	1	90	-	-	1	4	10	17	17	15	14	12
Fishmonger	290	6	284	-	-	6	15	45	34	35	49	46	54
2. In Vegetable Food.													
Corn, Flour, Seed, Merchant, Dealer	255	4	251	-	-	4	13	28	31	39	44	23	69
Miller	389	14	375	-	1	13	28	53	73	68	75	126	118
Baker	397	24	373	-	-	24	35	114	127	145	105	105	49
Confectioner, Pastry Cook	185	10	175	-	-	10	8	33	26	38	37	20	3
Greengrocer, Fruit, Vegetable, Dealer	396	17	379	-	-	17	17	45	74	68	72	69	17
Others	19	-	19	-	-	-	1	1	2	2	4	4	4
3. In Drinks and Stimulants.													
Maltster	287	3	284	-	-	3	5	21	16	24	46	31	138
Brewer	726	7	719	-	-	7	34	128	135	107	135	107	66
Wine and Spirit Merchant	337	7	330	-	-	7	15	63	48	50	39	38	27
Cellarman	71	2	69	-	-	2	3	14	16	14	10	4	2
Ginger Beer, Soda Water, &c., Manufacture	46	1	45	-	-	1	3	5	17	6	4	7	2
Sugar Refiner	39	1	38	-	-	1	1	9	17	10	15	6	1
Grocer, Tea Dealer	1323	46	1277	-	-	46	115	208	144	174	213	208	169
Tobacco, Cigar, Snuff, Manufacture, Tobacconist	154	10	144	-	2	8	20	30	25	20	15	14	10
Others	91	2	89	-	-	2	3	10	13	13	19	13	17

ENGLAND.—DEATHS of MALES of diffe

OCCUPATIONS.	TOTAL.	5											
15.—*cont.*													
4. In Earthenware.													
Earthenware Manufacture	528												
Tobacco-pipe Maker	44												
Earthenware and Glass Dealer	76												
Others	3												
5. In Glass.													
Glass Manufacture	299												
Other Workers in *Glass*	1												
6. In Salt.													
Salt Manufacture	40												
Other Dealers in *Salt*	7												
7. In Water.													
Waterworks Service	65												
Others	28												
8. In Gold, Silver, and Precious Stones.													
Goldsmith, Silversmith, Jeweller	297												
Plater, Plated Ware Manufacture	16												
Others	49												
9. In Copper.													
Copper Manufacture	83												
Coppersmith	42												
Others	2												
10. In Tin and Quicksilver.													
Tin Manufacture	68												
Tinplate Worker, Tinman	263												
Tinker	12												
11. In Zinc.													
Zinc Manufacture	16												
12. In Lead and Antimony.													
Lead Manufacture	55												
Others	6												
13. In Brass and other Mixed Metals.													
Brass Manufacture, Brazier	267												
Locksmith, Bellhanger	109												
Gas Fitter	141												
Wire Worker, Drawer	107												
Others	52												
14. In Iron and Steel.													
Iron Manufacture	2377												
Whitesmith	164												
Blacksmith	1989												
Nail Manufacture	278												
Anchorsmith, Chainsmith	75	2	73	-	1	1	5	7	9	16	13	19	4
Ironmonger, Hardware Dealer	232	8	224	-	-	8	24	30	28	35	47	49	14
Steel Manufacture, Worker	65	7	58	-	-	7	7	13	15	10	9	4	-
Others	41	4	37	-	2	2	5	3	11	5	4	3	1
VI.—INDEFINITE AND NON-PRODUCTIVE CLASS.													
16.—LABOURERS AND OTHERS.—*Branch of Labour undefined.*													
1. General Labourers.													
General Labourer, Labourer (branch undefined)	12137	425	11712	1	43	381	745	1600	1655	1621	2049	2079	1763
2. Other Persons of indefinite Occupations.													
Artizan, Mechanic (branch undefined)	164	6	158	-	-	6	17	33	31	19	19	24	10
Engine Driver, Stoker (branch undefined)	291	24	267	-	1	23	30	43	51	47	43	36	7
Factory Labourer (branch undefined)	190	25	165	-	9	16	17	25	24	27	20	27	10
Shopman, Assistant (branch undefined)	10	2	8	-	-	2	2	3	-	-	1	1	-
Apprentice (branch undefined)	4	3	1	-	-	3	1	-	-	-	-	-	-
Vagrant, Gipsy	41	1	40	-	-	1	2	4	6	11	9	2	4
Others of *undefined* Occupation	5612	2626	2986	-	2	2624	619	500	352	252	324	409	520
17. 1.—*Persons of* RANK or PROPERTY *not returned under any Office or Occupation.*													
Gentleman, Independent, Annuitant	2096	14	2082	-	-	14	42	115	130	104	363	576	665
18. 1.—SCHOLARS and CHILDREN *not engaged in any directly Productive Occupation.*													
Scholars and Children of no stated Occupation	15917	15917	-	11043	4874	-	-	-	-	-	-	-	-

I.—LONDON.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75 and upwds.
III.—Commercial Class.													
6. 1. Merchant	90	1	89	-	-	1	1	7	12	15	18	22	14
Banker	10	-	10	-	-	-	-	1	2	1	2	1	3
Bank Service	53	1	52	-	-	1	5	14	4	6	6	5	9
Insurance, Benefit Society, Service	26	2	24	-	-	2	1	6	6	2	4	2	3
Broker, Agent, Factor	81	2	79	-	-	2	-	11	13	23	9	16	7
Salesman (not otherwise described)	10	-	10	-	-	-	1	-	1	3	1	3	1
Auctioneer, Valuer, House Agent	39	-	39	-	-	-	1	4	6	7	7	9	5
Accountant	50	-	50	-	-	-	1	11	6	12	7	7	6
Commercial Clerk	415	37	378	-	1	36	57	98	66	44	44	41	31
Commercial Traveller	110	1	109	-	-	1	7	23	25	16	23	10	3
Other *Mercantile* Men	38	-	38	-	-	-	-	1	5	11	5	7	9
2. Pawnbroker	22	2	20	-	-	2	2	4	3	4	6	-	1
Shopkeeper (branch undefined), General Dealer	125	2	123	-	-	2	4	19	25	13	23	21	13
Huckster, Costermonger	56	4	52	-	-	4	1	8	18	4	9	7	1
Hawker, Pedlar	157	6	151	-	-	6	6	23	29	24	33	24	16
7. 1. Railway Engine Driver, Stoker	44	2	42	-	-	2	5	12	8	12	2	1	2
Railway Officer, Clerk, Station-master	63	3	60	-	-	3	6	25	11	10	7	1	-
Railway Attendant, Servant	151	8	143	-	2	6	25	44	36	20	11	4	3
2. Toll Collector, Turnpike-gate Keeper	8	-	8	-	-	-	1	-	-	2	2	1	2
Coach, Omnibus, Cab Owner, Livery Stable Keeper	41	-	41	-	-	-	1	3	10	9	7	5	6
Coachman (not domestic), Cabman, Flyman	421	2	419	-	-	2	17	57	88	99	75	63	18
Carman, Carrier, Carter, Drayman	426	21	405	-	-	21	44	95	78	81	45	27	13
Others	7	-	7	-	-	-	-	-	-	3	2	2	-
3. Inland Navigation Service	9	1	8	-	-	1	1	2	-	1	1	2	1
Bargeman, Waterman	153	7	146	-	-	7	11	24	30	16	23	24	11
4. Shipowner	8	-	8	-	-	-	-	-	2	-	5	1	-
Steam Navigation Service	18	-	18	-	-	-	2	7	3	3	2	1	-
Ship Steward, Cook	26	-	26	-	-	-	3	12	4	2	2	-	3
Seaman (Merchant Service)	335	19	316	-	-	19	41	75	69	50	36	22	4
Pilot	13	-	13	-	-	-	-	-	2	2	3	6	-
Harbour, Dock Service, Labourer	287	4	283	-	-	4	15	37	50	66	60	25	6
Wharfinger	7	-	7	-	-	-	-	1	2	1	2	1	-
Others	19	2	17	-	-	2	2	3	3	3	3	3	-
5. Warehouseman	137	10	127	-	-	10	16	32	26	22	16	11	4
6. Messenger, Porter, Errand Boy	448	49	399	-	7	42	24	62	78	67	75	65	29
Telegraph Service	13	7	6	-	-	7	3	2	1	-	-	-	-
Others engaged in *Messages*	9	-	9	-	-	-	-	-	-	2	3	2	1
IV.—Agricultural Class.													
8. 1. Land Proprietor (so returned)	14	-	14	-	-	-	-	1	1	1	3	1	7
Farmer, Grazier	47	-	47	-	-	-	-	3	-	4	7	13	20
Farm Bailiff	2	-	2	-	-	-	-	-	-	-	-	-	2
Agricultural Labourer	39	2	37	-	-	2	3	6	4	5	5	6	6
Shepherd (out-door)	2	-	2	-	-	-	-	-	-	1	-	-	1
Farm Servant (indoor)	1	-	1	-	-	-	-	-	1	-	-	-	-
Land Surveyor, Estate Agent	3	-	3	-	-	-	-	-	1	-	-	1	1
Others engaged in *Agriculture*	3	1	2	-	-	1	-	-	-	1	-	1	-
2. Woodman	9	-	9	-	-	-	1	1	2	2	2	-	1
3. Nurseryman, Seedsman, Florist	23	1	22	-	-	1	5	2	2	4	3	2	3
Gardener	221	7	214	-	-	7	2	16	24	29	44	53	44
Others engaged in *Horticulture*	2	-	2	-	-	-	-	-	-	1	-	1	-
9. 1. Horse Proprietor, Dealer	14	-	14	-	-	-	-	3	1	3	7	-	-
Horse Breaker	1	-	1	-	-	-	-	-	-	-	-	1	-
Horsekeeper, Groom, Jockey	222	3	219	-	-	3	19	30	44	42	32	27	5
Farrier, Veterinary Surgeon	64	1	63	-	-	1	3	19	10	7	14	7	3
Cattle, Sheep, Pig, Salesman	9	-	9	-	-	-	-	1	1	3	1	3	-
Drover	15	-	15	-	-	-	1	3	3	4	3	1	-
Gamekeeper	1	-	1	-	-	-	-	-	1	-	-	-	-
Fisherman	14	-	14	-	-	-	2	-	2	3	-	3	4
Others engaged about *Animals*	12	-	12	-	-	-	-	2	4	4	1	1	-
V.—Industrial Class.													
10. 1. Bookseller, Publisher	44	2	42	-	-	2	5	6	4	6	6	11	4
Bookbinder	78	3	75	-	1	2	9	8	13	14	11	14	6
Printer	295	26	269	-	3	23	33	46	45	32	46	25	17
Newspaper Agent, News-room Keeper	17	1	16	-	1	-	1	3	3	1	4	2	1
Others engaged in *Publications*	3	-	3	-	-	-	1	-	-	1	-	1	-

I.—LONDON.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

OCCUPATIONS.	Total.	AGES OF MALES. 5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwds.
11.—*cont.*													
5.	54	4	50	-	-	4	3	6	9	12	6	11	1
	73	4	69	-	-	4	3	5	10	19	13	16	3
	7	-	7	-	-	-	-	1	2	-	2	1	1
	28	2	24	-	-	2	-	6	4	7	4	-	1
	501	16	485	-	-	16	31	61	81	107	89	73	28
	17	-	17	-	-	-	2	2	5	3	2	1	-
	5	1	4	-	-	1	1	-	-	1	-	1	-
	2	-	2	-	-	-	-	-	-	-	2	-	-
	20	1	19	-	-	1	1	6	4	4	1	1	1
or)	5	-	5	-	-	-	-	1	1	-	2	1	-
	695	12	684	-	2	10	35	73	79	117	121	122	109
	1	-	1	-	-	-	-	-	-	-	1	-	-
ter	25	1	24	-	-	1	4	3	4	4	4	4	-
	20	1	19	-	-	1	2	3	3	5	4	1	-
	20	5	15	-	-	5	3	1	3	3	2	1	1
6. Mat Maker, Seller	12	-	12	-	-	-	-	3	1	3	4	1	1
Hemp Manufacture	1	-	1	-	-	-	-	-	-	1	-	-	-
Jute Manufacture	1	-	1	-	-	-	-	-	-	-	-	1	-
Rope, Cord, Maker	20	-	20	-	-	-	1	3	7	3	3	3	-
Sacking, Sack, Bag, Maker, Dealer	5	-	5	-	-	-	-	1	-	1	2	-	1
Others	2	-	2	-	-	-	-	1	-	-	-	1	-
12. 1. Cowkeeper, Milkseller	106	3	103	-	-	3	5	12	21	20	14	21	10
Cheesemonger	58	2	54	-	1	3	4	13	4	14	9	5	1
Butcher, Meat Salesman	255	8	247	-	-	8	22	37	37	43	22	23	6
Provision Curer, Dealer	22	-	22	-	-	-	2	4	6	5	1	3	1
Poulterer, Game Dealer	35	1	34	-	-	1	3	4	6	4	7	5	1
Fishmonger	87	4	83	-	-	4	9	13	15	6	15	12	5
2. Corn, Flour, Seed, Merchant, Dealer	49	-	49	-	-	-	2	6	6	10	9	5	1
Miller	21	-	21	-	-	-	1	3	4	3	5	3	2
Baker	204	4	200	-	-	4	16	34	23	31	49	34	9
Confectioner, Pastry Cook	44	2	42	-	-	2	3	5	7	11	7	7	4
Greengrocer, Fruit, Vegetable, Dealer	126	11	115	-	-	11	9	13	19	28	21	14	4
Others	1	-	1	-	-	-	-	-	-	1	-	-	-
3. Maltster	6	-	6	-	-	-	-	-	-	2	1	2	1
Brewer	107	-	107	-	-	-	3	23	11	19	13	19	4
Wine and Spirit Merchant	66	1	65	-	-	1	4	13	4	13	14	7	3
Cellarman	37	-	37	-	-	-	4	6	5	6	4	2	-
Ginger Beer, Soda Water, &c. Manufac.	11	-	11	-	-	-	-	1	3	3	1	2	1
Sugar Refiner	29	1	28	-	-	1	1	5	10	6	3	1	-
Grocer, Tea Dealer	149	10	139	-	-	10	14	25	29	30	21	17	13
Tobacco, Cigar, Snuff, Manufacture, Tobacconist	76	6	70	-	1	5	15	17	13	9	7	7	2
Others	48	1	47	-	-	1	2	6	9	9	7	6	6
13. 1. Soap Boiler	11	-	11	-	-	-	2	1	2	2	4	-	-
Tallow Chandler	34	1	33	-	-	1	3	-	4	5	2	5	4
Comb-maker	5	-	5	-	-	-	-	-	-	-	2	2	1
Others	27	-	27	-	-	-	-	3	3	4	7	3	3
2. Fellmonger	23	1	22	-	-	1	1	2	1	3	4	-	1
Tanner	33	-	33	-	-	-	1	7	4	5	7	6	3
Currier	80	3	80	-	-	3	3	10	17	16	17	13	3
Leather Case, Portmanteau, Bag, Maker	22	1	21	-	-	1	3	7	3	1	2	1	2
Others	8	-	8	-	-	-	-	-	1	3	1	2	1
3. Hair, Bristle, Manufacture	10	-	10	-	-	-	-	1	-	3	2	3	1
Brush, Broom, Maker	51	3	48	-	-	3	6	4	4	11	15	4	2
14. 1. Oil-miller, Refiner	5	-	5	-	-	-	-	1	-	1	-	-	-
Oil and Colourman	34	-	34	-	-	-	4	9	6	5	4	3	1
French-polisher	51	-	51	-	-	-	4	13	9	13	2	4	1
Japanner	12	-	12	-	-	-	1	1	3	2	1	3	1
India Rubber, Gutta Percha, Manufacture, Dealer	1	-	1	-	-	-	-	1	-	-	-	-	-
Floor Cloth Manufacture	8	-	8	-	-	-	-	-	1	2	2	3	-
Others	5	-	5	-	-	-	1	1	-	-	2	1	-
2. Timber, Wood, Merchant, Dealer	54	2	52	-	-	2	7	6	7	11	10	6	3
Sawyer	65	2	63	-	2	-	1	5	7	17	13	11	7
Lath, Fence, Hurdle, Maker	12	1	11	-	-	1	1	1	1	1	2	3	1
Wood, Turner, Worker	31	2	29	-	-	2	-	4	6	7	4	4	2
Box, Packing Case, Maker	22	2	20	-	-	2	1	2	3	5	2	2	1
Cooper, Hoop-maker and Bender	105	1	104	-	-	1	5	11	22	16	14	15	9
3. Cork Cutter, Manufacturer	18	2	16	-	-	2	-	3	4	2	4	2	1
4. Basket Maker	18	-	18	-	-	-	2	1	2	-	10	2	1
Hay and Straw Dealer	2	1	1	-	1	-	-	-	-	-	-	-	-
Thatcher	1	-	1	-	-	-	-	-	1	-	-	-	-
Others	9	-	9	-	-	-	1	2	1	1	1	2	1
5. Rag Gatherer, Dealer	10	2	8	-	1	1	-	1	1	2	2	1	-
Paper Manufacture	26	1	24	-	1	-	1	2	3	10	5	1	1
Stationer (not Law)	54	3	51	-	-	3	5	9	9	4	6	9	5
Paper Stainer	3	-	3	-	-	-	-	-	-	2	1	-	-
Other Workers in *Paper*	21	1	20	-	-	1	1	1	4	6	2	1	1

II.—SOUTH EASTERN COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871.

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwds.
Total of Males aged 5 years and upwards	13915	1802	12113	863	446	498	694	1585	1567	1568	1906	2873	2811
I.—Professional Class.													
1. 1. Civil Service	71	1	70	–	–	1	2	6	12	8	13	15	14
Governmt. Messengers, Workmen, &c.	82	2	80	–	–	2	2	11	13	11	12	13	13
Other *Government* Officers	3	–	3	–	–	–	1	–	2	–	–	–	–
2. Magistrate (so returned)	6	–	6	–	–	–	–	–	–	–	1	1	4
Officer of Law Court	5	–	5	–	–	–	–	–	–	2	–	1	2
Police	42	–	42	–	–	–	2	6	10	11	10	3	–
Prison Officer	11	1	10	–	–	1	–	1	3	1	2	2	1
Municipal, Parish, Union, Officer	45	–	45	–	–	–	–	2	2	9	12	9	11
3. *East India* and *Colonial* Service	2	–	2	–	–	–	–	–	–	–	1	–	1
2. 1. Army Officer (effective)	49	–	49	–	–	–	1	7	8	5	9	9	10
Army Retired and Half Pay Officer	17	–	17	–	–	–	–	1	1	3	3	–	9
Soldier	416	36	380	–	–	36	58	172	120	12	6	7	5
Militia, Volunteers	14	–	14	–	–	–	1	2	3	1	3	1	3
Army Pensioner	90	–	90	–	–	–	3	13	16	12	10	19	17
Others	2	–	2	–	–	–	–	–	–	–	2	–	–
2. Navy Officer (effective)	31	1	30	–	–	1	2	3	6	5	5	1	3
Navy Retired and Half Pay Officer	15	–	15	–	–	–	–	–	1	–	1	5	9
Seaman, R.N.	111	12	99	–	–	12	27	34	20	9	4	4	1
Royal Marine	63	1	61	–	–	1	6	14	21	9	2	4	5
Coastguard, Royal Naval Reserve	27	–	27	–	–	–	–	2	2	4	5	7	7
Navy Pensioner	127	–	127	–	–	–	3	9	14	26	19	32	24
3. 1. Clergyman	82	–	82	–	–	–	–	7	7	12	14	17	25
Protestant Minister	21	–	21	–	–	–	–	1	4	2	6	4	4
Roman Catholic Priest	3	–	3	–	–	–	–	1	1	1	–	–	–
Missionary, Scripture Reader	4	–	4	–	–	–	–	1	–	1	1	–	1
Church, Chapel Officer	16	–	16	–	–	–	–	1	1	–	3	4	7
Others	1	–	1	–	–	–	–	–	–	–	1	–	–
2. Barrister	10	–	10	–	–	–	–	1	1	3	1	3	1
Solicitor, Attorney	26	–	26	–	–	–	1	2	–	4	7	8	4
Law Student	1	–	1	–	–	–	–	–	1	–	–	–	–
Law Clerk	23	1	22	–	–	1	5	6	4	2	3	–	2
Law Stationer	1	–	1	–	–	–	–	–	–	–	–	1	–
3. Physician, Surgeon	41	–	41	–	–	–	3	5	5	3	6	10	9
Medical-Assistant, Student	5	1	4	–	–	1	3	–	–	–	–	–	1
Dentist	3	–	3	–	–	–	1	–	1	1	–	–	–
Chemist, Druggist	29	–	29	–	–	–	4	6	2	3	4	6	2
Others	2	–	2	–	–	–	–	–	1	1	–	–	–
4. Author, Editor, Journalist	3	–	3	–	–	–	–	1	1	1	–	–	–
Students and *Others*	3	1	2	–	–	1	–	–	1	–	–	1	–
5. Painter, Artist	8	–	8	–	–	–	–	–	–	1	4	1	2
Engraver	3	–	3	–	–	–	–	–	–	–	–	1	2
Photographer	7	2	5	–	–	2	–	1	1	2	1	–	–
Others engaged in the *Fine Arts*	1	–	1	–	–	–	–	–	1	–	–	–	–
6. Musician, Music Master	20	–	20	–	–	–	1	7	1	4	3	–	4
7. Actor	3	–	3	–	–	–	–	–	–	–	1	2	–
Exhibitions, Shows—Service	3	1	2	–	–	1	–	1	–	1	–	–	–
Others engaged in *Theatres*, &c.	6	–	6	–	–	–	2	1	2	1	–	–	–
8. Schoolmaster	27	1	26	–	–	1	1	5	3	–	4	6	7
Teacher, Professor, Lecturer	12	1	11	–	–	1	1	2	–	1	2	3	2
9. Civil Engineer	5	–	5	–	–	–	1	1	2	–	1	–	–
Other *Scientific* Persons	3	–	3	–	–	–	–	–	–	–	1	1	1
II.—Domestic Class.													
5. 1. Inn Keeper, Hotel Keeper, Publican	221	–	221	–	–	–	2	18	38	54	48	21	38
Beerseller	54	1	53	–	–	1	–	6	9	10	12	10	4
Lodging-house, Boarding-house Keeper	23	–	23	–	–	–	–	1	3	5	3	7	3
Coffee-house, Eating-house Keeper	6	–	6	–	–	–	–	–	1	1	2	1	1
Institution Service	8	–	8	–	–	–	1	4	1	2	–	–	–
Others	3	–	3	–	–	–	–	–	–	2	1	–	–
2. Domestic Servant (General)	106	6	100	–	1	5	6	23	12	11	16	12	15
Coachman	42	–	42	–	–	–	–	2	12	5	7	8	8
Groom	11	4	7	–	–	4	4	2	1	–	–	–	–
Gardener	36	1	35	–	–	1	1	2	4	4	10	9	5
Inn, Hotel Servant	67	1	66	–	1	–	6	23	9	11	7	7	3
Cook (not Domestic Servant)	3	–	3	–	–	–	1	–	–	–	1	1	–
Others	7	–	7	–	–	–	–	–	–	1	3	1	2
III.—Commercial Class.													
6. 1. Merchant	20	–	20	–	–	–	–	5	2	3	4	2	4
Banker	7	–	7	–	–	–	–	–	–	–	3	2	2
Bank Service	12	–	12	–	–	–	1	4	3	2	–	1	1
Insurance, Benefit Society, Service	7	1	6	–	–	1	1	1	2	–	1	–	1
Broker, Agent, Factor	11	–	11	–	–	–	1	3	3	2	–	1	1
Auctioneer, Valuer, House Agent	19	–	19	–	–	–	1	1	2	4	3	3	3
Accountant	20	–	20	–	–	–	–	4	2	6	4	4	–
Commercial Clerk	45	2	43	–	–	2	10	11	7	5	4	2	1
Commercial Traveller	15	–	15	–	–	–	–	3	4	6	2	–	–
Other *Mercantile* Men	9	–	9	–	–	–	–	–	–	–	–	1	2

Note.—The counties comprised in this Table are Surrey (*extra-metropolitan*), Kent (*extra-metropolitan*), Sussex, Hampshire, and Berkshire.

II.—SOUTH EASTERN COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871.

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwards.
Total of Males aged 5 years and upwards	13915	1802	12113	863	446	498	694	1585	1567	1588	1966	2272	2134
I.—Professional Class.													
1. 1. Civil Service	71	1	70	–	–	1	2	6	12	8	13	15	14
Government. Messengers, Workmen, &c.	82	2	80	–	–	2	3	11	13	11	12	13	15
Other *Government* Officers	3	–	3	–	–	–	1	–	2	–	–	–	–
2. Magistrate (so returned)	6	–	6	–	–	–	–	–	–	–	1	1	4
Officer of Law Court	5	–	5	–	–	–	–	–	–	2	–	1	2
Police	42	–	42	–	–	–	2	6	10	11	10	2	–
Prison Officer	11	1	10	–	–	1	–	1	3	1	2	2	1
Municipal, Parish, Union, Officer	45	–	45	–	–	–	–	2	2	9	12	9	11
3. *East India* and *Colonial* Service	2	–	2	–	–	–	–	–	–	–	1	–	1
2. 1. Army Officer (effective)	49	–	49	–	–	–	1	7	8	5	9	9	10
Army Retired and Half Pay Officer	17	–	17	–	–	–	–	1	1	3	3	–	9
Soldier	416	36	380	–	–	36	58	172	120	12	6	7	5
Militia, Volunteers	14	–	14	–	–	–	1	2	3	1	3	1	3
Army Pensioner	90	–	90	–	–	–	3	13	16	12	10	19	17
Others	2	–	2	–	–	–	–	–	–	–	2	–	–
2. Navy Officer (effective)	31	1	30	–	–	1	2	3	6	5	5	1	8
Navy Retired and Half Pay Officer	15	–	15	–	–	–	–	–	1	–	1	3	8
Seaman, R.N.	111	12	99	–	–	12	27	34	20	9	4	4	1
Royal Marine	62	1	61	–	–	1	6	14	21	9	2	4	5
Coastguard, Royal Naval Reserve	27	–	27	–	–	–	–	2	2	4	5	7	7
Navy Pensioner	127	–	127	–	–	–	3	9	14	26	19	22	34
3. 1. Clergyman	82	–	82	–	–	–	–	7	7	12	14	17	25
Protestant Minister	21	–	21	–	–	–	–	1	4	2	6	4	4
Roman Catholic Priest	3	–	3	–	–	–	–	1	1	1	–	–	–
Missionary, Scripture Reader	4	–	4	–	–	–	–	1	–	1	1	–	1
Church, Chapel Officer	16	–	16	–	–	–	–	1	1	–	3	4	7
Others	1	–	1	–	–	–	–	–	–	–	1	–	–
2. Barrister	10	–	10	–	–	–	–	1	1	3	1	3	1
Solicitor, Attorney	26	–	26	–	–	–	1	2	–	4	7	8	4
Law Student	1	–	1	–	–	–	–	–	1	–	–	–	–
Law Clerk	23	1	22	–	–	1	5	6	4	2	3	–	2
Law Stationer	1	–	1	–	–	–	–	–	–	–	–	1	–
3. Physician, Surgeon	41	–	41	–	–	–	3	5	5	3	6	10	9
Medical-Assistant, Student	5	1	4	–	–	1	3	–	–	–	–	–	1
Dentist	3	–	3	–	–	–	1	–	1	1	–	–	–
Chemist, Druggist	29	–	29	–	–	–	4	6	2	3	4	6	2
Others	2	–	2	–	–	–	–	–	1	1	–	–	–
4. Author, Editor, Journalist	3	–	3	–	–	–	–	1	1	1	–	–	–
Students and *Others*	3	1	2	–	–	1	–	–	1	–	–	1	–
5. Painter, Artist	8	–	8	–	–	–	–	–	–	1	4	1	2
Engraver	3	–	3	–	–	–	–	–	–	–	–	1	2
Photographer	7	2	5	–	–	2	–	1	1	2	1	–	–
Others engaged in the *Fine Arts*	1	–	1	–	–	–	–	–	1	–	–	–	–
6. Musician, Music Master	20	–	20	–	–	–	1	7	1	4	3	–	4
7. Actor	3	–	3	–	–	–	–	–	–	–	1	2	–
Exhibitions, Shows—Service	3	1	2	–	–	1	–	1	–	1	–	–	–
Others engaged in *Theatres*, &c.	6	–	6	–	–	–	2	1	2	1	–	–	–
8. Schoolmaster	27	1	26	–	–	1	1	5	3	–	4	6	7
Teacher, Professor, Lecturer	12	1	11	–	–	1	1	2	–	1	2	3	2
9. Civil Engineer	5	–	5	–	–	–	1	1	2	–	1	–	–
Other *Scientific* Persons	3	–	3	–	–	–	–	–	–	–	1	1	1
II.—Domestic Class.													
5. 1. Inn Keeper, Hotel Keeper, Publican	221	–	221	–	–	–	2	18	38	54	48	31	30
Beerseller	54	1	53	–	–	1	–	6	9	10	13	10	6
Lodging-house, Boarding-house Keeper	23	–	23	–	–	–	–	1	3	5	5	7	2
Coffee-house, Eating-house Keeper	6	–	6	–	–	–	–	–	1	1	2	1	1
Institution Service	8	–	8	–	–	–	1	4	1	2	–	–	–
Others	3	–	3	–	–	–	–	–	–	2	1	–	–
2. Domestic Servant (General)	106	6	100	–	1	5	6	25	12	11	16	12	12
Coachman	42	–	42	–	–	–	–	2	12	5	7	8	6
Groom	11	4	7	–	–	4	4	2	1	–	–	–	–
Gardener	36	1	35	–	–	1	1	2	4	4	10	9	5
Inn, Hotel Servant	67	1	66	–	1	–	6	23	9	11	7	7	3
Cook (not Domestic Servant)	3	–	3	–	–	–	1	–	–	–	1	1	–
Others	7	–	7	–	–	–	–	–	–	1	3	1	2
III.—Commercial Class.													
6. 1. Merchant	20	–	20	–	–	–	–	5	2	3	4	2	4
Banker	7	–	7	–	–	–	–	–	–	–	3	2	2
Bank Service	12	–	12	–	–	–	1	4	3	2	–	1	1
Insurance, Benefit Society, Service	7	1	6	–	–	1	1	1	2	–	1	–	1
Broker, Agent, Factor	11	–	11	–	–	–	1	3	3	2	–	1	1
Auctioneer, Valuer, House Agent	19	–	19	–	–	–	1	1	2	4	3	2	3
Accountant	20	–	20	–	–	–	–	4	2	6	4	4	–
Commercial Clerk	45	2	43	–	–	2	10	11	7	8	4	2	1
Commercial Traveller	15	–	15	–	–	–	–	3	4	6	2	–	–
Other *Mercantile* Men	9	–	9	–	–	–	–	–	–	–	–	4	1

Note.—The counties comprised in this Table are Surrey (*extra-metropolitan*), Kent (*extra-metropolitan*), Sussex, Hampshire, and Berkshire.

II.—SOUTH EASTERN COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

	OCCUPATIONS.	AGES OF MALES.												
		Total.	5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwds.
	10.—*cont.*													
11.	Coachmaker	38	1	37	-	-	1	2	5	4	8	7	5	6
	Wheelwright	61	2	59	-	-	2	1	6	3	8	7	14	28
	Others engaged about *Carriages*	1	-	1	-	-	-	-	-	-	1	-	-	-
12.	Saddler, Harness, Whip Maker	38	2	36	-	-	2	2	6	5	5	6	7	1
13.	Ship-builder, Shipwright, Boat-builder	80	5	75	-	-	5	2	6	5	10	11	16	25
	Sail Maker	13	-	13	-	-	-	1	1	-	5	2	1	3
	Others	3	-	3	-	-	-	1	1	-	-	-	1	-
14.	House Proprietor	38	-	38	-	-	-	1	1	1	1	10	10	14
	Architect	11	-	11	-	-	-	-	1	2	2	2	4	-
	Surveyor	7	-	7	-	-		-	1	2	3	-	1	-
	Builder	105	-	105	-	-	-	2	13	7	12	20	20	31
	Carpenter, Joiner	353	7	346	-	-	7	25	49	41	27	63	67	74
	Bricklayer	244	3	241	-	-	3	17	41	27	33	38	46	39
	Marble Mason	3	-	3	-	-	-	-	1	-	1	1	-	-
	Mason, Pavior	58	1	57	-	-	1	6	5	7	10	13	9	7
	Slater, Tiler	5	-	5	-	-	-	-	-	-	1	-	2	2
	Plasterer	24	2	22	-	-	2	1	5	4	3	2	4	1
	Paperhanger	8	-	8	-	-	-	1	2	1	1	1	2	-
	Plumber, Painter, Glazier	190	4	186	-	-	4	10	20	43	37	42	19	11
15.	Cabinet Maker, Upholsterer	47	-	47	-	-	-	1	5	5	7	8	14	7
	Undertaker	2	-	2	-	-	-	-	-	-	-	-	2	-
	Carver and Gilder	3	-	3	-	-	-	-	-	1	2	-	-	-
	Furniture Broker, Dealer	6	-	6	-	-	-	1	-	1	-	2	1	1
	Others	1	-	1	-	-	-	-	-	-	-	-	1	-
16.	Manufacturing Chemist, Labourer	3	-	3	-	-	-	-	-	1	-	1	1	-
	Dye, Colour Manufacture	2	-	2	-	-	-	-	-	-	1	-	1	-
	Dyer, Scourer, Calenderer	9	-	9	-	-	-	-	1	1	2	-	4	1
	Others	4	-	4	-	-	-	1	1	1	-	1	-	-
11.	1. Woolstapler	4	-	4	-	-	-	-	-	-	-	-	-	4
	Woollen Cloth Manufacture	1	-	1	-	-	-	-	-	1	-	-	-	-
	Carpet, Rug, Manufacture	2	-	2	-	-	-	-	1	-	-	-	1	-
	2. Silk, Satin, Manufacture	8	-	8	-	-	-	-	1	1	1	2	1	1
	3. Flax, Linen, Manufacture	2	-	2	-	-	-	1	-	-	-	-	1	-
	Lace Manufacture	1	-	1	-	-	-	-	-	-	-	-	1	-
	Cotton Manufacture	2	-	2	-	-	-	-	-	1	-	1	-	-
	Calico, Cotton, Printer	1	-	1	-	-	-	-	1	-	-	-	-	-
	4. Weaver (not otherwise described)	5	-	5	-	-	-	-	1	-	-	1	-	2
	Manchester Warehouseman	1	-	1	-	-	-	-	-	1	-	-	-	-
	Draper, Linen Draper, Mercer	73	8	65	-	-	8	11	14	14	6	6	7	7
	Fancy Goods Manufacturer, Dealer	1	-	1	-	-	-	-	-	-	1	-	-	-
	5. Hairdresser, Wig Maker	28	-	28	-	-	-	4	1	4	4	7	5	3
	Hatter, Hat Manufacture	7	-	7	-	-	-	-	-	-	2	2	-	3
	Furrier, Skinner	1	-	1	-	-	-	-	-	1	-	-	-	-
	Tailor	186	5	181	-	-	5	7	18	23	24	40	32	32
	Stay Maker, Ladies' Outfitter	2	-	2	-	-	-	-	-	1	-	1	-	-
	Hosier, Haberdasher	2	-	2	-	-	-	-	-	1	1	-	-	-
	Glover (leather)	1	-	1	-	-	-	-	-	-	1	-	-	-
	Shoemaker, Bootmaker	292	2	290	-	-	2	5	21	22	31	60	69	82
	Umbrella, Parasol, Stick, Maker	7	-	7	-	-	-	-	1	1	-	2	2	1
	Laundry Keeper	3	-	3	-	-	-	1	-	-	-	-	2	-
	Others providing *Dress*	4	-	4	-	-	-	1	-	1	-	1	-	1
	6. Hemp Manufacture	2	-	2	-	-	-	-	-	-	-	-	1	1
	Rope, Cord, Maker	7	2	5	-	-	2	-	-	-	-	2	2	1
	Sacking, Sack, Bag, Maker, Dealer	3	-	3	-	-	-	-	-	-	1	1	1	-
	Others	2	-	2	-	-	-	-	-	1	1	-	-	-
12.	1. Cowkeeper, Milkseller	41	-	41	-	-	-	-	2	5	5	10	13	6
	Cheesemonger	6	-	6	-	-	-	-	-	1	1	1	2	1
	Butcher, Meat Salesman	135	3	132	-	-	3	5	22	21	16	20	25	20
	Provision Curer, Dealer	3	-	3	-	-	-	-	-	2	-	-	-	1
	Poulterer, Game Dealer	8	-	8	-	-	-	-	-	2	1	1	2	2
	Fishmonger	41	1	40	-	-	1	1	9	5	12	3	6	-
	2. Corn, Flour, Seed, Merchant, Dealer	25	1	24	-	-	1	3	2	-	4	3	8	3
	Miller	52	2	50	-	-	2	3	7	8	11	5	5	7
	Baker	134	6	128	-	-	6	11	20	15	22	23	25	10
	Confectioner, Pastry Cook	18	-	18	-	-	-	1	2	6	1	2	4	2
	Greengrocer, Fruit, Vegetable Dealer	38	2	36	-	-	2	1	4	6	2	12	6	3
	Others	1	-	1	-	-	-	-	-	-	-	1	-	-
	3. Maltster	18	-	18	-	-	-	-	-	1	-	4	6	7
	Brewer	80	-	80	-	-	-	3	14	20	7	13	10	13
	Wine and Spirit Merchant	28	1	27	-	-	1	5	5	4	1	4	4	3
	Cellarman	5	-	5	-	-	-	1	-	1	2	1	-	-
	Ginger Beer, Soda Water, &c., Manufacture	2	1	2	-	-	1	-	1	1	-	-	-	-
	Sugar Refiner	1	-	1	-	-	-	-	-	1	-	-	-	-
	Grocer, Tea Dealer	138	8	130	-	-	8	12	23	12	18	21	21	15
	Tobacco, Cigar, Snuff, Manufacture, Tobacconist	12	1	11	-	-	1	-	5	2	2	-	1	1
	Others	8	-	8	-	-	-	1	-	-	1	4	1	1
18.	1. Soap Boiler	1	-	1	-	-	-	-	-	-	1	-	-	-
	Tallow Chandler	5	-	5	-	-	-	-	-	-	-	1	4	-
	Others	3	-	3	-	-	-	-	1	-	1	-	-	1

III.—SOUTH MIDLAND COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871.

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwards.
Total of Males aged 5 years and upwards	9292	1202	8090	580	298	324	406	842	980	1043	1317	1789	1791
I.—Professional Class.													
1. 1. Civil Service	35	–	35	–	–	–	–	5	2	7	5	10	6
Governmt. Messengers, Workmen, &c.	6	–	6	–	–	–	1	–	3	–	1	1	–
2. Magistrate (so returned)	1	–	1	–	–	–	–	–	–	1	–	–	–
Officer of Law Court	4	–	4	–	–	–	–	–	–	2	1	1	–
Police	19	–	19	–	–	–	2	6	3	2	2	3	1
Prison Officer	2	–	2	–	–	–	–	–	1	–	1	–	–
Municipal, Parish, Union, Officer	12	–	12	–	–	–	–	1	2	1	4	3	1
3. *East India* and *Colonial* Service	8	–	8	–	–	–	–	–	2	1	3	–	1
2. 1. Army Officer (effective)	3	–	3	–	–	–	–	2	–	–	1	–	–
Soldier	46	1	45	–	–	1	6	14	13	5	3	1	2
Militia, Volunteers	9	–	9	–	–	–	1	2	3	1	2	–	–
Army Pensioner	43	–	43	–	–	–	2	6	7	6	2	4	16
2. Navy Officer (effective)	5	–	5	–	–	–	2	–	1	1	1	–	–
Seaman, R.N.	2	–	2	–	–	–	–	1	1	–	–	–	–
Royal Marine	1	–	1	–	–	–	–	1	–	–	–	–	–
Navy Pensioner	5	–	5	–	–	–	–	1	1	–	–	1	2
3. 1. Clergyman	38	–	38	–	–	–	–	–	3	3	6	11	15
Protestant Minister	17	–	17	–	–	–	–	1	1	1	3	6	5
Roman Catholic Priest	1	–	1	–	–	–	–	–	–	–	1	–	–
Missionary, Scripture Reader	2	–	2	–	–	–	–	–	1	–	–	1	–
Church, Chapel Officer	10	–	10	–	–	–	–	–	–	1	1	4	4
Others	1	–	1	–	–	–	–	1	–	–	–	–	–
2. Barrister	7	–	7	–	–	–	–	–	1	2	1	1	2
Solicitor, Attorney	23	–	23	–	–	–	–	–	1	3	5	8	6
Law Clerk	15	–	15	–	–	–	5	–	3	5	–	2	–
3. Physician, Surgeon	28	–	28	–	–	–	1	3	1	2	7	7	7
Medical-Assistant, Student	4	1	3	–	–	1	–	2	1	–	–	–	–
Dentist	3	–	3	–	–	–	1	–	1	1	–	–	–
Chemist, Druggist	17	1	16	–	–	1	–	2	–	4	3	6	1
4. Author, Editor, Journalist	3	–	3	–	–	–	–	–	2	–	–	1	–
Students and *Others*	12	–	12	–	–	–	8	–	1	–	–	1	2
5. Painter, Artist	6	1	5	–	–	1	–	1	1	1	–	1	1
Sculptor	2	–	2	–	–	–	–	1	–	–	–	–	1
Engraver	2	–	2	–	–	–	–	–	–	1	–	1	–
Photographer	4	–	4	–	–	–	–	1	1	2	–	–	–
6. Musician, Music Master	15	1	14	–	–	1	–	4	6	2	1	1	–
7. Actor	4	–	4	–	–	–	–	–	2	1	1	–	–
Others engaged in *Theatres, &c.*	5	–	5	–	–	–	1	1	1	–	–	1	1
8. Schoolmaster	30	–	30	–	–	–	1	2	1	4	7	10	5
Teacher, Professor, Lecturer	7	–	7	–	–	–	–	2	1	1	2	1	–
9. Civil Engineer	2	–	2	–	–	–	–	–	–	–	1	–	1
Other *Scientific* Persons	1	–	1	–	–	–	–	–	–	–	–	1	–
II.—Domestic Class.													
5. 1. Inn Keeper, Hotel Keeper, Publican	151	–	151	–	–	–	2	10	27	34	36	21	19
Beerseller	33	–	33	–	–	–	–	1	4	13	6	5	4
Lodging-house, Boarding-house Keeper	3	–	3	–	–	–	–	–	–	–	1	–	2
Coffee-house, Eating-house Keeper	1	–	1	–	–	–	–	–	–	1	–	–	–
Institution Service	6	–	6	–	–	–	–	2	3	1	–	–	–
Others	3	1	2	–	–	1	–	–	–	2	–	–	–
2. Domestic Servant (General)	55	4	51	–	–	4	4	9	9	7	5	9	3
Coachman	35	–	35	–	–	–	1	3	7	7	3	8	4
Groom	14	2	12	–	–	2	1	3	5	–	1	2	–
Gardener	25	–	25	–	–	–	–	3	2	4	6	4	2
Inn, Hotel Servant	36	–	36	–	–	–	3	6	7	6	5	7	–
Cook (not Domestic Servant)	6	–	6	–	–	–	–	1	3	2	–	–	–
Others	19	–	19	–	–	–	–	1	6	5	2	3	2
III.—Commercial Class.													
6. 1. Merchant	8	–	8	–	–	–	–	1	2	2	–	2	1
Banker	4	–	4	–	–	–	–	–	–	–	–	1	3
Bank Service	6	–	6	–	–	–	–	1	2	1	–	2	–
Broker, Agent, Factor	6	–	6	–	–	–	–	–	2	1	1	2	–
Auctioneer, Valuer, House Agent	7	–	7	–	–	–	–	3	1	2	–	1	–
Accountant	7	–	7	–	–	–	1	2	1	1	–	–	1
Commercial Clerk	31	3	28	–	–	3	4	8	3	4	6	3	–
Commercial Traveller	14	–	14	–	–	–	–	1	7	1	3	–	–

Note.—The Counties comprised in this Table are Middlesex (*extra-metropolitan*), Hertfordshire, Buckinghamshire, Oxfordshire, Northamptonshire, Huntingdonshire, Bedfordshire, and Cambridgeshire.

III.—SOUTH MIDLAND COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75 and upwds.
10.—*cont.*													
11. Coachmaker	28	-	28	-	-	-	1	5	6	4	5	4	3
Wheelwright	43	1	42	-	-	1	3	6	1	8	8	6	10
Others engaged about *Carriages*	3	-	3	-	-	-	-	1	-	1	-	-	1
12. Saddler, Harness, Whip Maker	20	-	20	-	-	-	3	4	3	1	2	4	3
13. Ship-builder, Shipwright, Boat-builder	12	-	12	-	-	-	-	1	1	3	2	3	2
Sail Maker	1	-	1	-	-	-	-	-	-	-	-	-	1
14. House Proprietor	31	-	31	-	-	-	-	-	-	1	6	8	14
Architect	4	-	4	-	-	-	1	2	-	1	-	-	-
Surveyor	1	-	1	-	-	-	-	-	-	-	1	-	-
Builder	46	-	46	-	-	-	-	4	3	6	11	10	12
Carpenter, Joiner	218	1	217	-	-	1	12	21	18	26	41	37	61
Bricklayer	131	1	130	-	-	1	2	20	21	16	24	24	21
Marble Mason	5	-	5	-	-	-	1	1	-	-	2	-	1
Mason, Pavior	51	-	51	-	-	-	1	7	5	6	5	15	9
Slater, Tiler	5	1	4	-	-	1	-	-	-	1	-	2	1
Plasterer	10	1	9	-	-	1	1	3	-	-	1	2	1
Paperhanger	3	-	3	-	-	-	-	1	-	-	-	2	-
Plumber, Painter, Glazier	100	1	99	-	-	1	5	17	18	21	22	10	6
Others	1	-	1	-	-	-	-	-	-	-	-	-	1
15. Cabinet Maker, Upholsterer	40	1	39	-	-	1	1	13	3	7	6	4	3
Undertaker	2	-	2	-	-	-	-	-	-	-	-	-	2
Carver and Gilder	2	-	2	-	-	-	-	1	-	-	1	-	-
Furniture, Broker, Dealer	2	-	2	-	-	-	-	-	-	1	1	-	-
16. Manufacturing Chemist, Labourer	2	-	2	-	-	-	-	-	-	-	-	2	-
Dyer, Scourer, Calenderer	2	-	2	-	-	-	-	-	-	-	2	-	-
11. 1. Woolstapler	3	-	3	-	-	-	-	-	-	-	1	1	1
Woollen Cloth Manufacture	16	-	16	-	-	-	-	1	1	1	4	5	4
Blanket Manufacture	5	1	4	-	-	1	-	-	-	1	-	1	2
Carpet, Rug, Manufacture	1	-	1	-	-	-	-	-	1	-	-	-	-
2. Silk, Satin, Manufacture	3	-	3	-	-	-	1	-	-	1	-	1	-
3. Lace Manufacture	2	-	2	-	-	-	-	-	-	-	-	2	-
Cotton Manufacture	1	-	1	-	-	-	-	-	-	1	-	-	-
Others	2	-	2	-	-	-	-	-	-	-	-	1	1
4. Weaver (not otherwise described)	2	-	2	-	-	-	1	-	-	-	1	-	-
Manchester Warehouseman	1	-	1	-	-	-	-	-	-	-	-	1	-
Draper, Linen Draper, Mercer	55	2	53	-	-	2	5	10	10	9	7	7	3
Others	1	-	1	-	-	-	-	-	-	-	-	1	-
5. Hairdresser, Wig Maker	20	1	19	-	-	1	1	1	3	2	7	4	1
Hatter, Hat Manufacture	7	-	7	-	-	-	1	1	1	2	1	1	-
Straw Plait Manufacture	25	1	24	-	-	1	4	4	3	1	7	2	2
Tailor	149	3	146	-	-	3	3	15	20	24	28	35	18
Stay Maker, Ladies' Outfitter	2	-	2	-	-	-	-	-	-	-	-	-	2
Hosier, Haberdasher	2	-	2	-	-	-	-	1	-	1	-	-	-
Glover (leather)	5	-	5	-	-	-	-	-	-	-	2	1	2
Glove Maker (all except leather)	1	-	1	-	-	-	-	-	-	1	-	-	-
Shoemaker, Bootmaker	352	8	344	-	-	8	21	53	43	48	48	61	70
Patten, Clog Maker	2	-	2	-	-	-	-	-	1	-	1	-	-
Umbrella, Parasol, Stick, Maker	3	-	3	-	-	-	-	-	2	-	1	-	-
Laundry Keeper	3	-	3	-	-	-	-	-	1	1	-	1	-
Others providing *Dress*	2	-	2	-	-	-	-	1	-	-	-	-	1
6. Mat Maker, Seller	3	-	3	-	-	-	-	-	1	1	-	-	1
Jute Manufacture	1	-	1	-	-	-	-	-	-	-	1	-	-
Rope, Cord, Maker	7	-	7	-	-	-	-	-	1	1	2	2	1
Canvas, Sail Cloth, Manufacture, Dealer	3	-	3	-	-	-	1	-	-	-	-	1	1
Others	1	-	1	-	-	-	-	-	-	-	-	-	1
12. 1. Cowkeeper, Milkseller	17	-	17	-	-	-	1	1	2	3	1	5	4
Cheesemonger	2	-	2	-	-	-	-	-	1	-	1	-	-
Butcher, Meat Salesman	106	-	106	-	-	-	4	9	21	19	15	19	19
Provision Curer, Dealer	5	-	5	-	-	-	-	-	1	-	2	1	-
Poulterer, Game Dealer	3	-	3	-	-	-	-	-	1	1	1	-	-
Fishmonger	11	-	11	-	-	-	-	2	1	2	1	2	3
2. Corn, Flour, Seed, Merchant, Dealer	17	-	17	-	-	-	2	2	-	1	5	5	2
Miller	56	-	56	-	-	-	6	4	6	12	11	11	6
Baker	93	3	90	-	-	3	5	11	13	14	20	13	11
Confectioner, Pastry Cook	11	2	9	-	-	2	-	-	1	2	2	1	1
Greengrocer, Fruit, Vegetable, Dealer	16	-	16	-	-	-	-	1	4	3	3	2	3
3. Maltster	20	-	20	-	-	-	1	1	2	-	3	3	10
Brewer	70	2	68	-	-	2	3	12	11	6	17	12	7
Wine and Spirit Merchant	10	-	10	-	-	-	-	-	3	3	1	-	3
Ginger Beer, Soda Water, &c. Manuf.	4	-	4	-	-	-	-	1	1	1	1	-	-
Sugar Refiner	3	-	3	-	-	-	-	1	-	-	2	-	-
Grocer, Tea Dealer	74	-	74	-	-	-	8	14	12	6	9	17	4
Tobacco, Cigar, Snuff, Manufacture Tobacconist	2	-	2	-	-	-	-	2	-	-	-	-	-
Others	2	-	2	-	-	-	-	-	-	-	-	2	-

IV.—EASTERN COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871.

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwds.
Total of Males aged 5 years and upwards - - -	8019	1108	6911	516	262	330	390	701	730	863	977	1455	1787
I.—Professional Class.													
1. 1. Civil Service - - - - -	26	1	25	-	-	1	-	3	4	3	3	5	6
Government Messengers, Workmen, &c.	6	-	6	-	-	-	-	-	2	1	-	2	1
Other *Government* Officers - - -	2	-	2	-	-	-	-	-	-	1	-	1	-
2. Magistrate (so returned) - - -	3	-	3	-	-	-	-	-	-	1	-	-	2
Officer of Law Court - - - - -	6	-	6	-	-	-	-	-	1	2	1	1	1
Police - - - - - - -	14	-	14	-		-	1	6	3	1	-	3	-
Prison Officer - - - - -	3	-	3	-	-	-	-	-	2	-	-	1	-
Municipal, Parish, Union, Officer -	15	-	15	-	-	-	-	-	2	5	1	4	3
3. *East India* and *Colonial* Service -	2	-	2	-	-	-	-	-	1	-	-	1	-
2. 1. Army Officer (effective) - - -	4	-	4	-	-	-	-	-	3	-	-	-	1
Soldier - - - - - - -	71	5	66	-	-	5	4	22	23	8	-	1	3
Militia, Volunteers - - - -	4	-	4	-	-	-	-	2	1	1	-	-	-
Army Pensioner - - - - -	61	-	61	-	-	-	-	5	11	8	10	8	19
2. Navy Officer (effective) - - -	9	-	9	-	-	-	-	-	1	2	-	3	3
Seaman, R.N. - - - - -	19	-	19	-	-	-	2	4	8	4	-	-	1
Royal Marine - - - - -	5	-	5	-	-	-	-	1	1	1	2	-	-
Coastguard, Royal Naval Reserve -	5	-	5	-	-	-	-	-	1	-	2	2	-
Navy Pensioner - - - - -	5	-	5	-	-	-	-	1	-	1	-	-	3
3. 1. Clergyman - - - - - -	44	-	44	-	-	-	-	-	2	5	9	16	12
Protestant Minister - - - -	10	-	10	-	-	-	-	1	2	-	2	2	3
Missionary, Scripture Reader - -	2	-	2	-	-	-	-	-	-	-	1	1	-
Church, Chapel Officer - - -	13	-	13	-	-	-	-	1	1	2	-	5	4
2. Barrister - - - - - -	1	-	1	-	-	-	-	-	-	-	-	1	-
Solicitor, Attorney - - - -	19	-	19	-	-	-	-	4	1	4	6	1	3
Law Clerk - - - - - -	10	-	10	-	-	-	-	1	3	1	1	4	-
3. Physician, Surgeon - - - -	31	-	31	-	-	-	1	3	2	4	6	8	7
Dentist - - - - - - -	2	1	1	-	-	1	-	-	-	1	-	-	-
Chemist, Druggist - - - -	13	-	13	-	-	-	-	2	2	2	1	3	3
4. Students and *Others* - - - -	3	1	2	-	-	1	-	-	-	-	1	1	-
5. Painter, Artist - - - - -	3	-	3	-	-	-	-	-	1	1	-	1	-
Engraver - - - - - -	2	-	2	-	-	-	-	-	-	1	-	-	1
Photographer - - - - -	2	-	2	-	-	-	-	-	1	-	1	-	-
6. Musician, Music Master - - -	10	-	10	-	-	-	-	1	2	3	-	1	3
7. Others engaged in *Theatres, &c.* - -	3	1	2	-	-	1	-	1	1	-	-	-	-
8. Schoolmaster - - - - -	22	1	21	-	-	1	1	2	3	1	4	4	5
Teacher, Professor, Lecturer - -	3	1	2	-	-	1	-	-	-	-	1	-	1
9. Civil Engineer - - - - -	1	-	1	-	-	-	-	-	-	1	-	-	-
Other *Scientific* Persons - - -	1	-	1	-	-	-	-	-	-	-	-	-	1
II.—Domestic Class.													
5. 1. Inn Keeper, Hotel Keeper, Publican -	126	-	126	-	-	-	-	7	15	29	29	23	23
Beerseller - - - - - -	24	-	24	-	-	-	-	4	3	6	5	4	2
Lodging-house, Boarding-house Keeper	6	-	6	-	-	-	-	1	-	2	1	1	1
Institution Service - - - -	4	-	4	-	-	-	-	1	-	-	1	1	1
Others - - - - - - -	2	-	2	-	-	-	1	-	-	-	-	-	1
2. Domestic Servant (General) - -	40	5	35	-	-	5	7	4	4	6	3	6	5
Coachman - - - -	16	-	16	-	-	-	-	4	2	3	3	1	3
Groom - - - - -	13	-	13	-	-	-	4	3	-	1	1	1	3
Gardener - - - - -	11	-	11	-	-	-	1	1	2	2	-	1	4
Inn, Hotel Servant - - -	50	3	47	-	1	2	6	6	9	10	5	5	6
Cook (not Domestic Servant) - -	2	-	2	-	-	-	-	-	-	-	1	-	1
Others - - - - - - -	3	-	3	-	-	-	-	-	-	-	-	3	-
III.—Commercial Class.													
6. 1. Merchant - - - - - -	10	-	10	-	-	-	1	2	1	1	2	1	2
Banker - - - - - - -	1	-	1	-	-	-	-	-	-	-	-	-	1
Bank Service - - - - -	10	1	9	-	-	1	-	-	-	1	3	3	2
Insurance, Benefit Society, Service -	3	-	3	-	-	-	-	2	-	-	-	-	1
Broker, Agent, Factor - - - -	3	-	3	-	-	-	-	-	-	-	2	-	-
Salesman (not otherwise described) -	2	-	2	-	-	-	-	1	-	-	1	-	-
Auctioneer, Valuer, House Agent -	3	-	3	-	-	-	-	1	1	1	1	1	-
Accountant - - - - - -	6	-	6	-	-	-	-	2	1	1	1	1	-
Commercial Clerk - - - -	22	2	20	-	-	2	2	5	7	2	1	2	-
Commercial Traveller - - - -	9	-	9	-	-	-	-	3	1	5	-	-	-

Note.—The Counties comprised in this Table are Essex, Suffolk, and Norfolk.

IV.—EASTERN COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75 and upwds.
10.—*cont.*													
11. Coachmaker	21	1	20	-	-	1	1	1	1	6	5	5	1
Wheelwright	39	-	39	-	-	-	3	2	4	6	8	3	13
Others engaged about *Carriages*	1	-	1	-	-	-	1	-	-	-	-	-	-
12. Saddler, Harness, Whip Maker	31	-	31	-	-	-	2	4	2	5	3	4	11
13. Ship builder, Shipwright, Boat-builder	24	-	24	-	-	-	1	7	1	5	1	2	7
Sail Maker	5	-	5	-	-	-	-	1	-	1	3	-	-
14. House Proprietor	15	-	15	-	-	-	-	-	-	-	5	-	10
Architect	4	-	4	-	-	-	1	-	-	1	1	1	-
Surveyor	1	-	1	-	-	-	-	-	-	-	-	1	-
Builder	24	-	24	-	-	-	1	1	3	5	6	3	5
Carpenter, Joiner	217	2	215	-	-	2	18	24	16	20	23	32	60
Bricklayer	129	4	125	-	-	4	10	16	16	18	16	20	25
Mason, Pavior	15	-	15	-	-	-	1	2	2	2	3	3	2
Slater, Tiler	1	-	1	-	-	-	-	-	-	1	-	-	-
Plasterer	7	1	6	-	-	1	1	-	1	-	1	1	2
Paperhanger	2	-	2	-	-	-	1	1	-	-	-	-	-
Plumber, Painter, Glazier	64	-	64	-	-	-	5	9	14	16	7	9	4
Others	1	-	1	-	-	-	-	-	-	-	1	-	-
15. Cabinet Maker, Upholsterer	31	-	31	-	-	-	2	7	3	5	3	7	4
Carver and Gilder	4	-	4	-	-	-	-	-	-	1	-	3	-
Furniture Broker, Dealer	2	-	2	-	-	-	-	-	-	-	-	1	1
16. Manufacturing Chemist, Labourer	5	-	5	-	-	-	1	-	1	1	1	-	1
Dyer, Scourer, Calenderer	4	-	4	-	-	-	-	-	-	1	1	1	1
Others	3	-	3	-	-	-	-	-	-	1	-	1	1
11. 1. Woolstapler	5	-	5	-	-	-	-	-	-	-	2	1	2
Woollen Cloth Manufacture	3	-	3	-	-	-	-	-	1	2	-	-	-
Worsted Manufacture	1	-	1	-	-	-	-	-	-	-	-	-	1
2. Silk, Satin, Manufacture	30	1	29	-	-	1	-	-	-	5	5	9	10
3. Lace Manufacture	2	1	1	-	-	1	-	-	-	-	-	-	1
Calico, Cotton, Printer	1	-	1	-	-	-	-	-	-	-	-	-	1
4. Weaver (not otherwise described)	32	-	32	-	-	-	1	1	-	2	5	12	10
Manchester Warehouseman	1	-	1	-	-	-	-	-	-	-	-	1	-
Draper, Linen Draper, Mercer	29	3	26	-	-	3	4	7	3	5	5	-	1
Fancy Goods, Manufacturer, Dealer	1	-	1	-	-	-	-	-	-	-	-	1	-
Trimming Maker, Dealer	1	-	1	-	-	-	-	-	-	1	-	-	-
Others	3	-	3	-	-	-	-	-	-	-	-	2	1
5. Hairdresser, Wig Maker	16	-	16	-	-	-	-	4	1	3	3	4	1
Hatter, Hat Manufacture	2	-	2	-	-	-	-	-	1	1	-	-	-
Straw Plait Manufacture	1	-	1	-	-	-	-	-	1	-	-	-	-
Furrier, Skinner	2	-	2	-	-	-	-	-	1	1	-	-	-
Tailor	80	3	77	-	1	2	3	13	8	13	11	13	14
Glover (leather)	6	-	6	-	-	-	-	-	-	2	-	1	3
Shoemaker, Bootmaker	248	10	238	-	1	9	15	28	26	29	29	55	55
Patten, Clog Maker	1	-	1	-	-	-	-	-	-	-	-	1	-
Umbrella, Parasol, Stick, Maker	2	-	2	-	-	-	-	-	1	-	-	1	-
6. Mat Maker, Seller	3	-	3	-	-	-	1	-	-	1	-	1	-
Hemp Manufacture	1	-	1	-	-	-	-	-	-	-	-	-	1
Jute Manufacture	3	3	-	-	-	3	-	-	-	-	-	-	-
Rope, Cord, Maker	12	-	12	-	-	-	-	-	-	2	2	5	3
Sacking, Sack, Bag, Maker, Dealer	1	-	1	-	-	-	-	-	-	-	-	-	1
Others	1	-	1	-	-	-	-	-	-	-	1	-	-
12. 1. Cowkeeper, Milkseller	11	-	11	-	-	-	-	-	2	2	2	3	2
Cheesemonger	1	-	1	-	-	-	-	-	1	-	-	-	-
Butcher, Meat Salesman	74	4	70	-	-	4	1	8	6	6	13	15	17
Provision Curer, Dealer	3	-	3	-	-	-	-	-	-	-	2	1	-
Poulterer, Game Dealer	3	-	3	-	-	-	-	-	1	1	-	1	-
Fishmonger	20	1	19	-	-	1	2	-	3	4	3	7	-
2. Corn, Flour, Seed, Merchant, Dealer	17	-	17	-	-	-	1	4	3	1	2	1	3
Miller	66	-	63	-	-	-	4	-	9	8	11	13	22
Baker	81	3	78	-	-	3	4	4	12	9	14	21	11
Confectioner, Pastry Cook	4	1	3	-	-	1	-	-	-	-	1	2	-
Greengrocer, Fruit, Vegetable, Dealer	10	-	10	-	-	-	-	2	-	6	-	2	-
3. Maltster	27	-	27	-	-	-	1	2	3	2	5	6	8
Brewer	30	-	30	-	-	-	1	4	5	7	7	4	2
Wine and Spirit Merchant	11	1	10	-	-	1	1	2	2	2	-	1	2
Cellarman	2	-	2	-	-	-	1	-	-	-	-	1	-
Ginger Beer, Soda Water, &c., Manufacture	2	-	2	-	-	-	1	-	-	-	-	1	-
Sugar Refiner	3	-	3	-	-	-	-	1	-	1	1	-	-
Grocer, Tea Dealer	69	1	68	-	-	1	6	8	9	10	9	13	11
Tobacco, Cigar, Snuff, Manufacture, Tobacconist	7	-	7	-	-	-	1	1	3	-	1	-	1
Others	1	-	1	-	-	-	-	-	-	-	1	-	-

V.—SOUTH WESTERN COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871.

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwards.
Total of Males aged 5 years and upwards	12707	1757	10950	778	448	581	571	1178	1148	1311	1794	2304	2634
I.—Professional Class.													
1. 1. Civil Service	41	–	41	–	–	–	1	3	1	7	9	8	12
Governmt. Messengers, Workmen, &c.	60	–	60	–	–	–	–	7	7	8	10	7	21
Other *Government* Officers	1	–	1	–	–	–	–	–	–	–	–	1	–
2. Magistrate (so returned)	3	–	3	–	–	–	–	–	–	–	–	1	1
Officer of Law Court	13	1	12	–	–	1	1	–	2	–	2	5	2
Police	23	–	23	–	–	–	4	5	5	1	2	4	2
Prison Officer	2	–	2	–	–	–	–	1	–	–	–	–	1
Municipal, Parish, Union, Officer	26	–	26	–	–	–	1	–	1	4	5	7	6
3. *East India* and *Colonial* Service	5	–	5	–	–	–	–	–	–	–	2	–	3
2. 1. Army Officer (effective)	29	–	29	–	–	–	–	1	3	5	5	9	6
Army Retired and Half Pay Officer	5	–	5	–	–	–	–	–	–	2	–	2	1
Soldier	79	5	74	–	–	5	12	33	18	7	1	–	3
Militia, Volunteers	9	–	9	–	–	–	–	1	4	1	1	–	2
Army Pensioner	93	–	93	–	–	–	2	10	14	21	6	17	23
2. Navy Officer (effective)	34	–	34	–	–	–	2	2	2	1	7	6	14
Navy Retired and Half Pay Officer	13	–	13	–	–	–	–	–	1	1	2	4	5
Seaman, R.N.	91	15	76	–	1	14	13	31	14	10	3	4	1
Royal Marine	24	–	24	–	–	–	2	13	5	–	–	1	3
Coastguard, Royal Naval Reserve	18	–	18	–	–	–	–	1	5	3	–	7	2
Navy Pensioner	148	–	148	–	–	–	2	15	20	23	27	28	33
3. 1. Clergyman	66	–	66	–	–	–	1	5	4	6	11	21	18
Protestant Minister	15	–	15	–	–	–	3	1	1	2	2	3	3
Roman Catholic Priest	2	–	2	–	–	–	–	–	–	–	–	–	2
Missionary, Scripture Reader	3	–	3	–	–	–	–	–	–	1	1	–	1
Church, Chapel Officer	8	–	8	–	–	–	–	–	–	–	3	2	3
Others	1	–	1	–	–	–	–	–	–	–	–	–	1
2. Barrister	2	–	2	–	–	–	–	–	–	–	–	1	1
Solicitor, Attorney	25	–	25	–	–	–	1	2	4	4	3	6	5
Law Student	1	–	1	–	–	–	1	–	–	–	–	–	–
Law Clerk	20	2	18	–	–	2	2	5	5	2	2	2	–
3. Physician, Surgeon	59	–	59	–	–	–	2	7	8	7	14	11	15
Medical-Assistant, Student	1	–	1	–	–	–	–	–	–	1	–	–	–
Dentist	3	–	3	–	–	–	–	2	1	–	–	–	–
Chemist, Druggist	21	1	20	–	–	1	1	5	6	2	3	3	–
4. Author, Editor, Journalist	1	–	1	–	–	–	–	–	–	–	–	–	1
Students and *Others*	2	–	2	–	–	–	–	2	–	–	–	–	–
5. Painter, Artist	4	–	4	–	–	–	1	–	–	–	–	2	1
Sculptor	2	–	2	–	–	–	–	2	–	–	–	–	–
Engraver	1	–	1	–	–	–	–	–	–	1	–	–	–
Photographer	4	–	4	–	–	–	–	2	–	2	–	–	–
6. Musician, Music Master	7	–	7	–	–	–	–	–	1	1	–	3	2
7. Exhibitions, Shows—Service	1	–	1	–	–	–	–	–	–	–	1	–	–
8. Schoolmaster	41	1	40	–	–	1	1	3	6	2	13	6	9
Teacher, Professor, Lecturer	3	–	3	–	–	–	–	1	1	–	1	–	–
9. Civil Engineer	5	–	5	–	–	–	–	3	–	–	2	–	–
Other *Scientific* Persons	1	–	1	–	–	–	–	1	–	–	–	–	–
II.—Domestic Class.													
5. 1. Inn Keeper, Hotel Keeper, Publican	159	–	159	–	–	–	–	13	28	26	39	29	24
Beerseller	17	–	17	–	–	–	–	–	2	3	4	5	3
Lodging-house,Boarding-houseKeeper	11	–	11	–	–	–	–	–	2	1	1	3	4
Coffee-house, Eating-house Keeper	3	–	3	–	–	–	–	1	–	1	–	1	–
Institution Service	1	–	1	–	–	–	–	–	1	–	–	–	–
Others	1	–	1	–	–	–	–	–	–	–	1	–	–
2. Domestic Servant (General)	62	2	60	–	–	2	6	4	10	12	8	5	13
Coachman	23	–	23	–	–	–	–	3	3	4	3	3	7
Groom	12	–	12	–	–	–	1	4	1	1	–	3	2
Gardener	27	–	27	–	–	–	1	3	2	4	2	9	6
Inn, Hotel Servant	34	1	33	–	–	1	–	7	7	3	6	6	4
Cook (not Domestic Servant)	1	–	1	–	–	–	–	–	–	–	–	1	–
Others	2	–	2	–	–	–	–	–	1	–	–	1	–
III.—Commercial Class.													
6. 1. Merchant	12	–	12	–	–	–	–	1	2	2	1	5	1
Banker	4	–	4	–	–	–	–	–	1	–	–	2	1
Bank Service	11	1	10	–	–	1	–	2	3	1	2	–	2
Insurance, Benefit Society, Service	2	–	2	–	–	–	–	–	1	1	–	–	–
Broker, Agent, Factor	9	–	9	–	–	–	–	2	4	1	1	–	1
Salesman (not otherwise described)	1	–	1	–	–	–	–	–	–	–	–	–	1
Auctioneer, Valuer, House Agent	8	–	8	–	–	–	–	1	1	2	2	–	2
Accountant	33	–	33	–	–	–	3	8	2	5	4	6	5
Commercial Clerk	21	1	20	–	1	–	4	5	2	2	3	2	1
Commercial Traveller	14	–	14	–	–	–	1	3	4	4	2	–	–

Note.—The Counties comprised in this Table are Wiltshire, Dorsetshire, Devonshire, Cornwall, and Somersetshire.

V.—SOUTH WESTERN COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

	OCCUPATIONS.	AGES OF MALES.											
		Total.	5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwards.
	10.—*cont.*													
12.	Saddler, Harness, Whip Maker	29	2	27	-	-	2	5	3	4	3	4	4	4
13.	Ship-builder, Shipwright, Boat-builder	60	2	58	-	-	2	6	10	8	7	6	8	12
	Sail Maker	9	1	8	-	-	1	-	1	1	1	1	2	2
14.	House Proprietor	21	-	21	-	-	-	-	-	-	3	5	4	9
	Architect	1	-	1	-	-	-	-	-	-	-	-	1	-
	Surveyor	1	-	1	-	-	-	-	-	-	-	-	-	1
	Builder	47	1	46	-	-	1	2	5	5	3	15	9	7
	Carpenter, Joiner	380	6	374	-	-	6	20	50	44	34	58	72	90
	Bricklayer	28	1	27	-	-	1	1	5	3	3	5	5	5
	Marble Mason	8	-	8	-	-	-	-	-	1	-	3	2	2
	Mason, Pavior	299	8	291	-	-	8	17	38	28	26	51	68	65
	Slater, Tiler	1	-	1	-	-	-	-	-	-	-	-	-	1
	Plasterer	37	1	36	-	-	1	1	3	4	5	5	9	8
	Paperhanger	1	-	1	-	-	-	-	-	-	-	-	1	-
	Plumber, Painter, Glasier	103	6	97	-	1	5	9	12	10	25	15	23	4
	Others	2	1	1	-	-	1	-	-	-	-	-	-	1
15.	Cabinet Maker, Upholsterer	40	2	38	-	-	2	-	11	5	4	4	6	5
	Carver and Gilder	3	-	3	-	-	-	-	-	-	1	1	1	-
	Furniture Broker, Dealer	5	-	5	-	-	-	-	-	1	1	2	1	-
16.	Manufacturing Chemist, Labourer	3	-	3	-	-	-	1	-	-	-	1	1	-
	Dyer, Scourer, Calenderer	6	-	6	-	-	-	-	-	2	1	1	-	2
	Others	1	-	1	-	-	-	-	-	-	-	1	-	-
11.	1. Woolstapler	6	-	6	-	-	-	-	-	-	3	2	1	-
	Woollen Cloth Manufacture	82	2	80	-	-	2	1	2	4	3	18	28	24
	Fuller	1	-	1	-	-	-	-	-	-	-	-	-	1
	Wool, Woollen, Dyer	4	-	4	-	-	-	-	-	-	-	1	2	1
	Cloth Merchant, Dealer	1	-	1	-	-	-	-	1	-	-	-	-	-
	Blanket Manufacture	2	-	2	-	-	-	-	-	-	-	-	2	-
	Carpet, Rug, Manufacture	1	-	1	-	-	-	-	-	-	-	-	-	1
	3. Flax, Linen Manufacture	8	-	8	-	-	-	-	-	1	-	1	4	2
	Lace Manufacture	12	-	12	-	-	-	-	2	2	4	1	1	2
	4. Weaver (not otherwise described)	11	-	11	-	-	-	-	1	-	1	3	2	4
	Draper, Linen Draper, Mercer	66	4	62	-	-	4	10	14	6	8	9	7	5
	Trimming Maker, Dealer	1	-	1	-	-	-	-	-	-	1	-	-	-
	Others	1	-	1	-	-	-	-	-	-	-	1	-	-
	5. Hairdresser, Wig Maker	14	1	13	-	-	1	2	2	-	1	3	4	1
	Hatter, Hat Manufacture	14	-	14	-	-	-	-	-	1	2	2	4	5
	Furrier, Skinner	1	-	1	-	-	-	-	1	-	-	-	-	-
	Tailor	147	-	147	-	-	-	4	19	17	14	25	35	23
	Hosier, Haberdasher	2	-	2	-	-	-	-	2	-	-	-	-	-
	Glover (leather)	13	1	12	-	-	1	3	1	1	3	2	1	-
	Glove Maker (all except leather)	3	-	3	-	-	-	-	-	1	-	1	-	1
	Shoemaker, Bootmaker	361	7	354	-	-	7	22	36	28	40	39	83	87
	Umbrella, Parasol, Stick, Maker	1	-	1	-	-	-	-	-	-	-	-	1	-
	Others providing *Dress*	1	-	1	-	-	-	-	-	-	-	-	1	-
	6. Mat Maker, Seller	2	-	2	-	-	-	-	-	-	1	-	1	-
	Hemp Manufacture	4	1	3	-	-	1	-	-	1	-	-	2	-
	Rope, Cord, Maker	18	2	16	-	-	2	1	-	-	3	5	2	5
	Canvas, Sailcloth, Manufacture, Dealer	7	-	7	-	-	-	-	-	-	-	1	3	3
12.	1. Cowkeeper, Milkseller	59	3	56	-	1	2	2	6	6	2	6	17	17
	Cheesemonger	1	-	1	-	-	-	-	-	-	-	1	-	-
	Butcher, Meat Salesman	112	2	110	-	-	2	4	10	16	12	12	26	26
	Provision Curer, Dealer	5	-	5	-	-	-	-	-	-	2	2	1	-
	Poulterer, Game Dealer	6	-	6	-	-	-	-	2	2	1	1	-	-
	Fishmonger	14	-	14	-	-	-	-	-	1	2	3	5	3
	2. Corn, Flour, Seed, Merchant, Dealer	13	-	13	-	-	-	-	4	2	2	-	4	1
	Miller	75	3	72	-	-	3	2	6	12	11	10	20	11
	Baker	86	1	85	-	-	1	4	11	10	16	15	13	11
	Confectioner, Pastry Cook	11	-	11	-	-	-	-	1	1	1	3	1	4
	Greengrocer, Fruit, Vegetable, Dealer	13	-	13	-	-	-	-	2	1	-	-	4	6
	Others	1	-	1	-	-	-	-	-	-	-	-	-	1
	3. Maltster	25	-	25	-	-	-	-	2	1	2	4	8	8
	Brewer	54	1	53	-	-	1	3	7	12	9	11	6	3
	Wine and Spirit Merchant	10	-	10	-	-	-	-	2	2	1	1	1	3
	Cellarman	8	-	8	-	-	-	-	1	1	-	3	1	2
	Ginger Beer, Soda Water, &c., Manufacture	2	-	2	-	-	-	-	-	2	-	-	-	-
	Sugar Refiner	4	-	4	-	-	-	-	2	-	-	1	-	1
	Grocer, Tea Dealer	87	3	84	-	-	3	10	8	4	10	17	17	12
	Tobacco, Cigar, Snuff, Manufacture, Tobacconist	5	-	5	-	-	-	-	2	-	-	1	-	2
	Others	3	-	3	-	-	-	-	-	1	-	1	-	1
13.	1. Soap Boiler	1	-	1	-	-	-	-	1	-	-	-	-	-
	Tallow Chandler	6	-	6	-	-	-	-	1	2	-	1	1	1
	Comb-maker	1	-	1	-	-	-	-	-	-	-	-	-	1
	Others	2	-	2	-	-	-	-	1	-	1	-	-	-
	2. Fellmonger	3	-	3	-	-	-	-	-	-	1	-	1	1
	Tanner	29	-	29	-	-	-	-	3	3	6	6	6	5
	Currier	11	-	11	-	-	-	1	3	2	-	1	2	2
	Others	3	-	3	-	-	-	1	-	-	-	-	2	-
	3. Brush, Broom, Maker	12	2	10	-	-	2	1	-	1	2	1	4	1

VI.—WEST MIDLAND COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871.

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwds.
Total of Males aged 5 years and upwards	17457	2421	15036	1171	599	651	795	1627	1879	2341	2633	3064	272
I.—Professional Class.													
1. 1. Civil Service	27	–	27	–	–	–	1	2	3	2	6	5	1
Government. Messengers, Workmen, &c.	24	–	24	–	–	–	2	2	3	3	4	5	5
Other *Government* Officers	5	–	5	–	–	–	–	–	1	–	2	–	2
2. Magistrate (so returned)	7	–	7	–	–	–	–	–	–	–	–	5	2
Officer of Law Court	9	–	9	–	–	–	–	1	–	3	2	1	2
Police	28	–	28	–	–	–	3	4	13	5	2	1	–
Municipal, Parish, Union, Officer	47	–	47	–	–	–	1	4	8	9	5	7	13
3. *East India* and *Colonial* Service	1	–	1	–	–	–	–	–	–	–	–	–	1
2. 1. Army Officer (effective)	13	–	13	–	–	–	–	–	1	1	1	5	5
Army Retired and Half Pay Officer	11	–	11	–	–	–	–	1	1	2	1	4	2
Soldier	34	–	34	–	–	–	6	13	10	3	–	2	–
Militia, Volunteers	12	–	12	–	–	–	–	–	1	7	1	–	3
Army Pensioner	61	–	61	–	–	–	2	3	6	10	15	9	16
2. Navy Officer (effective)	2	–	2	–	–	–	–	–	–	–	–	1	1
Navy Retired and Half Pay Officer	1	–	1	–	–	–	–	–	–	–	–	1	–
Royal Marine	3	–	3	–	–	–	–	–	–	1	–	1	1
Navy Pensioner	11	–	11	–	–	–	–	1	–	1	2	2	5
3. 1. Clergyman	57	–	57	–	–	–	1	4	4	8	9	14	17
Protestant Minister	20	–	20	–	–	–	1	1	–	2	4	3	9
Roman Catholic Priest	2	–	2	–	–	–	–	–	–	1	–	1	–
Missionary, Scripture Reader	1	–	1	–	–	–	–	–	–	–	–	1	–
Church, Chapel Officer	10	–	10	–	–	–	–	–	1	–	3	3	1
Others	1	–	1	–	–	–	1	–	–	–	–	–	–
2. Barrister	1	–	1	–	–	–	–	–	–	–	1	–	–
Solicitor, Attorney	34	–	34	–	–	–	1	6	4	4	6	11	2
Law Clerk	23	1	22	–	–	1	3	4	3	3	4	3	2
3. Physician, Surgeon	39	–	39	–	–	–	–	4	1	6	9	10	9
Medical-Assistant, Student	3	–	3	–	–	–	2	1	–	–	–	–	–
Dentist	2	–	2	–	–	–	–	1	–	–	–	1	–
Chemist, Druggist	30	1	29	–	–	1	2	4	9	3	2	6	3
4. Students and *Others*	3	–	3	–	–	–	–	–	2	–	1	–	–
5. Painter, Artist	16	–	16	–	–	–	–	1	2	4	4	3	–
Sculptor	1	–	1	–	–	–	–	–	–	–	1	–	–
Engraver	11	–	11	–	–	–	–	2	2	3	–	3	1
Photographer	4	–	4	–	–	–	–	2	2	–	–	–	–
Others engaged in *Fine Arts*	2	–	2	–	–	–	1	–	–	–	1	–	–
6. Musician, Music Master	23	–	23	–	–	–	5	5	7	2	1	3	–
Others	1	–	1	–	–	–	–	–	1	–	–	–	–
7. Actor	3	–	3	–	–	–	–	–	1	1	1	–	–
Others engaged in *Theatres, &c.*	3	–	3	–	–	–	1	–	1	1	–	–	–
8. Schoolmaster	53	1	52	–	–	1	4	7	6	14	8	9	4
Teacher, Professor, Lecturer	11	3	8	–	–	3	3	1	–	1	1	2	–
9. Civil Engineer	3	–	3	–	–	–	–	–	–	–	1	–	2
II.—Domestic Class.													
5. 1. Inn Keeper, Hotel Keeper, Publican	261	6	255	–	–	6	3	19	40	52	71	48	27
Beerseller	50	–	50	–	–	–	1	2	13	12	14	4	4
Lodging-house, Boarding-house Keeper	10	–	10	–	–	–	–	–	1	1	2	2	4
Coffee-house, Eating-house Keeper	5	–	5	–	–	–	–	–	1	1	2	1	–
Institution Service	3	–	3	–	–	–	–	–	1	–	–	–	2
Others	2	–	2	–	–	–	–	–	1	1	–	–	–
2. Domestic Servant (General)	68	5	63	–	–	5	7	8	8	11	11	11	7
Coachman	31	–	31	–	–	–	1	3	6	5	3	5	8
Groom	17	1	16	–	1	–	2	1	1	3	3	3	2
Gardener	17	–	17	–	–	–	1	3	1	1	–	5	6
Inn, Hotel Servant	27	2	25	–	–	2	2	4	3	5	3	2	1
Others	3	–	3	–	–	–	–	1	–	1	–	1	–
III.—Commercial Class.													
6. 1. Merchant	11	–	11	–	–	–	1	–	2	1	3	2	2
Banker	10	–	10	–	–	–	–	–	–	2	1	5	2
Bank Service	12	–	12	–	–	–	1	4	1	1	2	1	1
Insurance, Benefit Society, Service	5	1	4	–	–	1	–	2	–	–	1	1	–
Broker, Agent, Factor	20	1	19	–	–	1	2	2	2	4	5	3	1

Note.—The Counties comprised in this Table are Gloucestershire, Herefordshire, Shropshire, Staffordshire, Worcestershire, and Warwickshire.

VI.—WEST MIDLAND COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75 and upwds.
10.—*cont.*													
3. Lithographer, Lithographic Printer	3	–	3	–	–	–	–	1	2	–	–	–	–
Others	1	–	1	–	–	–	–	–	–	1	–	–	–
4. Wood-carver	1	–	1	–	–	–	–	–	–	–	1	–	–
Others	1	–	1	–	–	–	–	–	1	–	–	–	–
5. Toy Maker, Dealer	16	–	16	–	–	–	1	1	2	2	3	4	3
Others	6	–	6	–	–	–	1	1	–	1	–	2	1
6. Others engaged in *Designs, &c.*	6	–	6	–	–	–	–	2	1	–	–	1	2
7. Watch Maker, Clock Maker	77	2	75	–	–	2	15	15	5	10	11	11	8
Philosophical Instrument Maker; Optician	19	2	17	–	–	2	–	3	2	4	2	4	2
Weighing Mach., Scale, Measure, Mkr.	7	–	7	–	–	–	–	1	1	–	4	1	–
9. Gunsmith, Gun Manufacture	114	2	112	–	–	2	11	23	18	19	16	15	10
Others	4	–	4	–	–	–	–	2	–	1	1	–	–
10. Engine and Machine Maker	173	9	164	–	–	9	10	33	22	25	28	22	14
Spinning, Weaving, Machine Maker	2	–	2	–	–	–	–	–	–	1	–	1	–
Agricultural Implement, Machine Mkr.	17	1	16	–	–	1	2	5	2	2	1	3	1
Millwright	13	1	12	–	–	1	–	2	–	2	2	4	2
Tool Maker, Dealer	64	2	62	–	1	1	2	13	6	10	19	1	9
File Maker, Dealer	12	–	12	–	–	–	–	3	5	1	1	2	–
Saw Maker, Dealer	3	–	3	–	–	–	–	1	1	–	–	1	–
Cutler	17	–	17	–	–	–	1	2	2	4	6	2	–
Needle Manufacture	29	3	26	–	–	3	4	2	5	3	7	3	3
Pin Manufacture	1	1	–	–	–	1	–	–	–	–	–	–	–
Others engaged in *Tool Making, &c.*	3	–	3	–	–	–	–	–	–	1	1	1	–
11. Coachmaker	58	1	57	–	–	1	3	5	9	16	14	7	3
Wheelwright	70	–	70	–	–	–	5	4	6	17	5	18	15
Others engaged about *Carriages*	10	–	10	–	–	–	–	2	3	4	–	–	1
12. Saddler, Harness, Whip Maker	98	5	88	–	–	5	5	12	8	18	18	15	12
13. Ship-builder, Shipwright, Boat-builder	26	–	26	–	–	–	1	2	7	5	3	4	4
Sail Maker	2	–	2	–	–	–	1	1	–	–	–	–	–
14. House Proprietor	53	–	53	–	–	–	–	–	2	2	11	23	15
Architect	10	–	10	–	–	–	–	2	4	2	1	1	–
Surveyor	6	–	6	–	–	–	–	–	1	–	2	1	2
Builder	57	–	57	–	–	–	1	2	5	11	11	15	12
Carpenter, Joiner	332	11	321	–	2	9	11	40	46	36	38	43	42
Bricklayer	229	6	223	–	–	6	10	17	30	32	34	38	42
Marble Mason	4	2	2	–	–	2	–	–	–	1	1	–	–
Mason, Pavior	158	1	157	–	–	1	4	12	29	28	34	32	15
Slater, Tiler	16	2	14	–	–	2	–	4	3	2	3	2	–
Plasterer	51	2	49	–	1	1	2	8	5	12	7	8	7
Paperhanger	1	–	1	–	–	–	–	–	1	–	–	–	–
Plumber, Painter, Glazier	189	6	183	–	–	6	6	24	41	26	31	23	13
15. Cabinet Maker, Upholsterer	76	3	73	–	–	3	6	8	12	14	11	13	9
Undertaker	3	–	3	–	–	–	–	–	1	–	–	2	–
Carver and Gilder	12	–	12	–	–	–	1	1	2	3	1	2	2
Furniture Broker, Dealer	9	–	9	–	–	–	–	–	1	2	2	3	1
16. Manufacturing Chemist, Labourer	11	–	11	–	–	–	–	2	–	1	3	3	–
Dye, Colour Manufacture	1	1	–	–	–	1	–	–	–	–	–	–	–
Dyer, Scourer, Calenderer	11	–	11	–	–	–	1	1	3	–	2	3	1
Others	3	–	3	–	–	–	–	–	–	1	1	1	–
11. 1. Woolstapler	6	–	6	–	–	–	–	–	–	1	1	1	2
Felt Manufacture	2	–	2	–	–	–	–	–	–	–	1	–	1
Woollen Cloth Manufacture	59	5	54	–	–	5	1	2	–	4	10	14	21
Wool, Woollen, Dyer	4	–	4	–	–	–	–	–	–	–	2	–	2
Worsted Manufacture	1	–	1	–	–	–	–	–	–	–	–	–	1
Cloth Merchant, Dealer	1	–	1	–	–	–	–	1	–	–	–	–	–
Stuff Manufacture	4	–	4	–	–	–	–	–	–	–	–	2	2
Carpet, Rug, Manufacture	47	–	47	–	–	–	2	2	2	12	7	10	12
2. Silk, Satin, Manufacture	26	5	21	–	–	5	2	2	2	1	7	3	4
Silk Dyer, Printer	9	1	8	–	–	1	1	–	2	1	1	2	–
Ribbon Manufacture	65	3	62	–	–	3	1	6	10	6	12	13	12
3. Flax, Linen Manufacture	5	–	5	–	–	–	–	1	–	–	1	1	2
Lace Manufacture	2	–	2	–	–	–	–	1	–	–	–	–	1
Tape Manufacture, Dealer	8	–	8	–	–	–	–	–	–	2	2	2	2
Cotton Manufacture	8	1	7	–	–	1	1	2	–	1	1	2	–
Cotton, Calico Warehouseman, Dealer	1	–	1	–	–	–	–	–	1	–	–	–	–
Calico, Cotton, Printer	3	1	2	–	–	1	–	–	–	–	1	1	–
4. Weaver (not otherwise described)	46	–	46	–	–	–	2	1	1	5	9	13	15
Bleacher (not otherwise described)	1	–	1	–	–	–	–	–	–	–	1	–	–
Draper, Linen Draper, Mercer	73	5	68	–	–	5	5	13	6	18	12	7	7
Fancy Goods Manufacturer, Dealer	1	–	1	–	–	–	–	1	–	–	–	–	–
Trimming Maker, Dealer	2	1	1	–	–	1	–	–	–	–	–	1	–
Others	1	–	1	–	–	–	–	–	–	–	–	–	1

VI.—WEST MIDLAND COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

	OCCUPATIONS.	AGES OF MALES.											
		Total.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75 and upwds.
15.	1. Coal Miner	774	50	724	-	6	44	75	106	118	117	122	109	75
	Iron Miner	27	2	25	-	1	1	2	3	4	6	7	2	1
	Miner (branch undefined)	26	4	22	-	-	4	2	6	8	3	3	-	-
	Coal Mine Service	41	1	40	-	-	1	1	3	7	2	15	8	4
	Mine Service (Metal not stated)	12	-	12	-	-	-	-	-	1	4	1	3	3
	2. Coal Merchant, Dealer	39	1	38	-	-	1	1	2	3	6	8	10	8
	Coal-heaver, Labourer	60	2	58	-	-	2	1	6	5	11	15	13	7
	Coke Burner, Dealer	5	-	5	-	-	-	-	1	-	1	2	1	-
	Chimney Sweeper	9	1	8	-	-	1	-	-	1	1	3	1	-
	Gas Works Service	30	1	29	-	-	1	4	3	9	4	2	4	3
	Other Workers in *Coal*	6	-	6	-	-	-	-	4	-	-	1	1	-
	3. Stone Quarrier	38	-	38	-	-	-	3	2	3	3	4	6	7
	Stone, Merchant, Cutter, Dresser	11	-	11	-	-	-	2	1	1	4	2	1	-
	Limestone Quarrier, Lime-Burner	20	2	18	-	-	2	-	-	2	-	7	7	2
	Clay Labourer	1	-	1	-	-	-	-	-	-	-	1	-	-
	Brick Maker, Dealer	33	5	28	-	-	5	6	9	11	15	14	11	22
	Railway Labourer, Platelayer, Navvy	20	2	28	-	-	2	8	18	22	14	12	7	6
	Road Contractor, Inspector, Surveyor	1	-	1	-	-	-	-	-	-	1	-	-	-
	Road Labourer	68	-	68	-	-	-	3	3	7	3	14	20	18
	Scavenger, Dust Collector	3	-	3	-	-	-	-	-	-	-	1	-	2
	Others	8	-	8	-	-	-	2	1	1	1	1	1	1
	4. Earthenware Manufacture	395	17	378	1	2	14	40	32	34	94	66	33	21
	Tobacco-pipe Maker	2	-	2	-	-	-	-	-	-	-	-	2	-
	Earthenware and Glass Dealer	14	-	14	-	-	-	-	-	4	2	2	3	3
	Others	1	-	1	-	-	-	-	-	-	-	1	-	-
	5. Glass Manufacture	77	3	74	-	-	3	1	10	15	13	16	12	7
	6. Salt Manufacture	6	-	6	-	-	-	-	1	1	-	-	4	-
	7. Waterworks Service	5	-	5	-	-	-	1	-	-	1	1	1	1
	Others	4	-	4	-	-	-	-	-	-	1	-	2	1
	8. Goldsmith, Silversmith, Jeweller	78	3	75	-	-	3	11	15	7	10	14	15	3
	Plater, Plated Ware Manufacture	12	-	12	-	-	-	-	3	2	3	2	1	1
	Others	19	-	19	-	-	-	2	2	2	2	5	5	1
	9. Copper Manufacture	4	1	3	-	-	1	-	2	-	-	-	1	-
	Coppersmith	5	-	5	-	-	-	-	-	-	-	2	2	1
	10. Tin Manufacture	3	1	2	-	-	1	-	1	-	-	-	1	-
	Tinplate Worker, Tinman	36	-	36	-	-	-	2	5	7	4	3	9	6
	Tinker	2	-	2	-	-	-	-	-	-	-	2	-	-
	11. Zinc Manufacture	2	-	2	-	-	-	-	-	-	1	-	1	-
	12. Lead Manufacture	9	1	8	-	-	1	-	2	1	2	-	3	-
	13. Brass Manufacture, Brazier	115	6	109	-	1	5	13	16	21	18	15	15	11
	Locksmith, Bellhanger	86	6	80	-	-	6	8	6	4	10	13	20	13
	Gas Fitter	18	2	16	-	-	2	2	3	3	4	1	3	-
	Wire Worker, Drawer	20	-	20	-	-	-	2	1	4	6	3	2	2
	Others	38	-	38	-	-	-	3	5	7	9	4	7	3
	14. Iron Manufacture	539	21	518	-	4	17	60	77	71	100	72	66	51
	Whitesmith	18	-	18	-	-	-	1	2	2	3	2	6	2
	Blacksmith	272	9	263	-	-	9	21	23	33	43	43	52	39
	Nail Manufacture	154	4	150	-	2	2	4	5	12	22	28	46	29
	Anchorsmith, Chainsmith	33	1	32	-	-	1	3	4	3	7	5	7	2
	Ironmonger, Hardware Dealer	36	2	34	-	-	2	4	5	2	3	6	7	3
	Steel Manufacture, Worker	1	-	1	-	-	-	-	-	-	-	-	1	-
	Others	14	-	14	-	-	-	3	2	5	1	-	2	1
	VI.—Indefinite and Non-productive Class.													
16.	1. General Labourer, Labourer (branch undefined)	1558	43	1515	-	6	37	45	141	169	243	294	326	253
	2. Artizan, Mechanic (branch undefined)	5	-	5	-	-	-	-	1	1	-	1	1	1
	Engine Driver, Stoker (branch undef.)	13	1	12	-	-	1	-	-	-	4	4	2	2
	Factory Labourer (branch undefined)	12	-	12	-	-	-	2	3	2	1	1	2	1
	Shopman, Assistant (branch undefined)	1	1	-	-	-	1	-	-	-	-	-	-	-
	Apprentice (branch undefined)	1	1	-	-	-	1	-	-	-	-	-	-	-
	Vagrant, Gipsy	3	1	2	-	-	1	-	-	1	-	-	-	1
	Others of *undefined* Occupation	470	229	241	-	-	229	22	64	13	26	37	64	16
17.	1. Gentleman, Independent, Annuitant	162	1	161	-	-	1	2	7	15	14	22	46	54
18.	1. Scholars and Children of no stated Occupation	1727	1727	-	1170	557	-	-	-	-	-	-	-	-

VII.—NORTH MIDLAND COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

	OCCUPATIONS.	AGES OF MALES.												
		Total.	5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwards.
7.	1. Railway Engine Driver, Stoker	13	–	13	–	–	–	2	5	4	2	–	–	–
	Railway Officer, Clerk, Station-master	15	2	13	–	–	2	3	1	3	3	3	–	–
	Railway Attendant, Servant	49	4	45	–	–	4	11	13	4	6	5	4	2
	2. Toll Collector, Turnpike gate Keeper	6	–	6	–	–	–	–	–	3	–	1	1	1
	Coach, Omnibus, Cab Owner, Livery Stable Keeper	9	–	9	–	–	–	1	1	1	2	2	2	–
	Coachman (not domestic), Cabman, Flyman	17	–	17	–	–	–	–	1	2	2	6	3	3
	Carman, Carrier, Carter, Drayman	84	1	83	–	–	1	3	1	5	1	7	20	6
	3. Inland Navigation Service	2	–	2	–	–	–	–	–	1	–	1	–	–
	Bargeman, Waterman	36	–	36	–	–	–	–	1	6	4	2	11	12
	Others	2	–	2	–	–	–	–	–	–	–	–	1	1
	4. Steam Navigation Service	3	–	3	–	–	–	–	2	1	–	–	–	–
	Ship Steward, Cook	2	–	2	–	–	–	1	1	–	–	–	–	–
	Seaman (Merchant Service)	35	3	32	–	–	3	4	6	2	3	4	3	5
	Pilot	2	–	2	–	–	–	–	–	–	–	–	2	–
	Boatman on Seas	1	–	1	–	–	–	–	–	–	–	–	–	1
	Harbour, Dock Service, Labourer	13	–	13	–	–	–	–	–	4	5	–	3	1
	5. Warehouseman	11	–	11	–	–	–	2	2	2	–	1	1	3
	6. Messenger, Porter, Errand Boy	13	2	11	–	2	–	1	1	5	1	1	1	1
	IV.—Agricultural Class.													
8.	1. Land Proprietor (so returned)	34	–	34	–	–	–	–	–	1	2	6	10	15
	Farmer, Grazier	740	–	740	–	–	–	2	25	39	76	125	199	295
	Farmer's Son, Brother, Grandson, Nephew	82	60	22	22	18	20	14	5	2	1	–	–	–
	Farm Bailiff	19	–	19	–	–	–	–	–	1	2	4	2	10
	Agricultural Labourer	1163	16	1147	–	1	15	82	93	90	104	164	292	373
	Shepherd (out-door)	29	–	29	–	–	–	–	–	4	7	4	6	8
	Farm Servant (in-door)	24	10	14	–	1	9	3	2	–	–	3	–	1
	Land Surveyor, Estate Agent	5	–	5	–	–	–	–	–	–	–	1	1	2
	Land Drainage Service	2	1	1	–	–	1	–	–	–	–	–	1	–
	Agricultural Machine Proprietor, Attendant	6	1	5	–	–	1	–	–	–	1	1	1	2
	Others engaged in *Agriculture*	2	–	2	–	–	–	1	–	–	–	–	–	1
	2. Woodman	13	–	13	–	–	–	–	1	–	–	2	5	5
	3. Nurseryman, Seedsman, Florist	2	–	2	–	–	–	–	1	–	–	1	–	–
	Gardener	89	1	88	–	–	1	–	6	8	8	16	16	32
9.	1. Horse Proprietor, Dealer	2	–	2	–	–	–	–	–	–	–	–	2	–
	Horse Breaker	7	–	7	–	–	–	–	–	1	2	–	1	3
	Horsekeeper, Groom, Jockey	52	1	51	–	–	1	7	11	8	3	6	9	7
	Farrier, Veterinary Surgeon	5	–	5	–	–	–	–	–	–	1	–	1	2
	Cattle, Sheep, Pig, Salesman	22	–	22	–	–	–	–	2	3	3	5	6	3
	Drover	10	–	10	–	–	–	–	2	–	2	–	4	1
	Gamekeeper	14	–	14	–	–	–	1	1	3	4	4	1	–
	Vermin Destroyer	2	–	2	–	–	–	–	–	–	–	1	1	–
	Fisherman	37	7	30	–	1	6	5	5	7	4	1	5	3
	Others engaged about *Animals*	1	–	1	–	–	–	–	–	–	–	–	1	–
	V.—Industrial Class.													
10.	1. Bookseller, Publisher	1	–	1	–	–	–	–	–	–	–	–	–	1
	Bookbinder	2	1	1	–	–	1	–	1	–	–	–	–	–
	Printer	20	2	18	–	–	2	2	5	3	3	2	2	1
	Newspaper Agent, News-room Keeper	2	–	2	–	–	–	–	1	–	–	1	–	–
	Others engaged in *Publications*	1	–	1	–	–	–	–	–	–	–	1	–	–
	2. Musical Instrument Maker, Dealer	1	–	1	–	–	–	–	–	–	–	–	1	–
	Others	1	–	1	–	–	–	–	–	–	1	–	–	–
	3. Lithographer, Lithographic Printer	1	–	1	–	–	–	–	1	–	–	–	–	–
	Others	1	1	–	–	–	1	–	–	–	–	–	–	–
	6. Others engaged in *Designs, &c.*	6	–	6	–	–	–	–	–	–	–	2	3	1
	7. Watch Maker, Clock Maker	8	1	7	–	–	1	–	–	–	3	2	1	1
	Weighing Machine, Scale, Measure, Maker	1	–	1	–	–	–	–	–	–	1	–	–	–
	8. Surgical Instrument Maker	2	–	2	–	–	–	–	–	–	–	1	1	–
	9. Gunsmith, Gun Manufacture	2	–	2	–	–	–	–	–	1	–	–	1	–
	10. Engine and Machine Maker	55	5	50	–	–	5	9	9	9	5	6	10	–
	Spinning, Weaving, Machine Maker	28	1	27	–	–	1	2	3	3	2	6	7	4
	Agricultural Implement, Machine Mkr.	6	–	6	–	–	–	1	–	–	1	1	2	1
	Millwright	6	–	6	–	–	–	–	–	1	1	1	2	1
	Tool Maker, Dealer	3	–	3	–	–	–	–	–	–	–	–	3	–
	File Maker, Dealer	2	–	2	–	–	–	1	–	–	–	–	–	1
	Cutler	7	–	7	–	–	–	–	1	–	–	3	1	2
	Scissors Maker	1	–	1	–	–	–	–	–	1	–	–	–	–
	Needle Manufacture	12	–	12	–	–	–	–	–	2	1	4	1	4
11.	Coachmaker	10	1	9	–	–	1	–	2	1	–	2	1	2
	Wheelwright	52	1	51	–	–	1	5	5	3	6	9	12	11
	Others engaged about *Carriages*	1	–	1	–	–	–	–	–	–	–	1	–	–
12.	Saddler, Harness, Whip Maker	25	1	24	–	–	1	2	2	5	3	3	7	1
13.	Ship-builder, Shipwright, Boat-builder	16	2	14	–	–	2	2	2	2	2	2	3	1
	Sail Maker	2	1	1	–	–	1	–	–	–	–	–	1	–
	Others	1	–	1	–	–	–	–	1	–	–	–	–	–

VII.—NORTH MIDLAND COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

	OCCUPATIONS.	AGES OF MALES.												
		Total.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75 and upwds.
14.	1. Oil-miller, Refiner	6	-	6	-	-	-	2	2	2	-	-	-	-
	Oil and Colourman	1	-	1	-	-	-	-	1	-	-	-	-	-
	French-polisher	4	-	4	-	-	-	-	-	2	-	-	-	2
	Japanner	1	-	1	-	-	-	-	1	-	-	-	-	-
	India Rubber, Gutta Percha, Manufacture, Dealer	16	-	16	-	-	-	3	6	3	2	2	-	-
	Floor Cloth Manufacture	1	-	1	-	-	-	-	-	-	-	-	1	-
	Others	2	-	2	-	-	-	-	1	-	-	-	1	-
	2. Timber, Wood, Merchant, Dealer	12	-	12	-	-	-	3	2	2	2	1	-	2
	Sawyer	27	-	27	-	-	-	5	2	5	2	4	2	6
	Wood, Turner, Worker	7	-	7	-	-	-	2	-	1	-	1	-	2
	Box, Packing Case, Maker	2	-	2	-	-	-	-	-	-	-	1	1	-
	Cooper, Hoop Maker and Bender	9	-	9	-	-	-	-	1	1	-	3	3	1
	Others	3	-	3	-	-	-	-	-	-	-	1	-	2
	3. Cork Cutter, Manufacturer	2	-	2	-	-	-	-	-	-	1	-	-	1
	4. Basket Maker	18	-	18	-	-	-	-	1	3	1	2	9	2
	Hay and Straw Dealer	2	-	2	-	-	-	-	-	-	1	-	-	1
	Thatcher	2	-	2	-	-	-	-	-	-	1	-	-	1
	5. Rag Gatherer, Dealer	5	-	5	-	-	-	-	-	-	-	2	1	2
	Paper Manufacture	4	1	3	-	-	1	-	-	-	-	-	1	2
	Paper Stainer	1	-	1	-	-	-	1	-	-	-	-	-	-
	Other Workers in *Paper*	1	-	1	-	-	-	-	-	-	-	-	1	-
15.	1. Coal Miner	257	29	228	-	9	20	33	51	31	32	29	25	27
	Lead Miner	37	-	37	-	-	-	3	3	4	4	3	3	7
	Iron Miner	13	3	10	-	2	1	-	-	1	2	2	3	-
	Miner (branch undefined)	8	-	8	-	-	-	1	1	3	1	-	1	1
	Coal Mine Service	11	-	11	-	-	-	-	5	1	2	2	1	-
	Mine Service (Metal not stated)	2	-	2	-	-	-	-	-	-	1	-	-	1
	Others	1	-	1	-	-	-	-	-	-	-	-	1	-
	2. Coal Merchant, Dealer	40	-	40	-	-	-	1	2	6	2	17	6	6
	Coal-heaver, Labourer	56	7	49	-	2	5	-	9	10	9	12	3	4
	Coke Burner, Dealer	3	-	3	-	-	-	-	-	-	2	-	1	-
	Chimney Sweeper	8	-	8	-	-	-	-	-	1	2	3	-	2
	Gas Works Service	13	-	13	-	-	-	2	4	1	2	2	1	1
	3. Stone Quarrier	32	-	32	-	-	-	3	5	4	6	3	9	2
	Stone, Merchant, Cutter, Dresser	10	-	10	-	-	-	-	-	2	3	2	2	1
	Limestone Quarrier, Lime-Burner	5	-	5	-	-	-	-	-	-	-	2	1	2
	Clay Labourer	1	1	-	-	-	1	-	-	-	-	-	-	-
	Brick Maker, Dealer	39	-	39	-	-	-	4	3	7	8	2	7	8
	Railway Labourer, Platelayer, Navvy	70	3	67	-	-	3	11	9	14	17	11	5	-
	Road Contractor, Inspector, Surveyor	4	-	4	-	-	-	-	-	1	-	2	-	1
	Road Labourer	19	-	19	-	-	-	-	-	-	1	-	8	10
	Others	6	-	6	-	-	-	1	2	-	1	-	1	1
	4. Earthenware Manufacture	13	-	13	-	-	-	2	1	2	-	2	4	2
	Tobacco-pipe Maker	2	-	2	-	-	-	-	-	-	-	-	2	-
	Earthenware and Glass Dealer	1	-	1	-	-	-	-	-	-	-	-	1	-
	5. Glass Manufacture	1	-	1	-	-	-	-	-	-	-	-	1	-
	7. Waterworks Service	2	-	2	-	-	-	-	1	-	-	1	-	-
	Others	2	-	2	-	-	-	-	-	-	1	-	-	1
	8. Goldsmith, Silversmith, Jeweller	1	-	1	-	-	-	-	1	-	-	-	-	-
	10. Tinplate Worker, Tinman	13	-	13	-	-	-	3	2	-	2	-	4	2
	12. Lead Manufacture	2	-	2	-	-	-	-	-	-	-	1	1	-
	13. Brass Manufacture, Brazier	6	-	6	-	-	-	-	-	4	2	-	-	-
	Locksmith, Bellhanger	1	-	1	-	-	-	-	-	-	-	1	-	-
	Gas Fitter	5	-	5	-	-	-	-	1	3	1	-	-	-
	Wire Worker, Drawer	2	-	2	-	-	-	-	-	1	-	1	-	-
	14. Iron Manufacture	81	10	71	-	1	9	7	18	12	6	16	7	5
	Whitesmith	5	-	5	-	-	-	-	-	1	1	3	-	-
	Blacksmith	114	3	111	-	-	3	7	17	8	13	19	25	23
	Nail Manufacture	20	-	20	-	-	-	-	1	4	-	6	3	6
	Ironmonger, Hardware Dealer	11	-	11	-	-	-	1	3	-	2	-	5	-
	Others	1	-	1	-	-	-	-	-	1	-	-	-	-
	VI.—Indefinite and Non-productive Class.													
16.	1. General Labourer, Labourer (branch undefined)	670	16	654	-	1	15	27	71	69	86	110	140	131
	2. Artizan, Mechanic (branch undefined)	8	-	8	-	-	-	1	2	1	2	-	2	-
	Engine Driver, Stoker (branch undefined)	23	3	20	-	-	3	2	5	3	2	5	2	1
	Factory Labourer (branch undefined)	12	5	7	-	1	4	-	1	-	1	1	2	1
	Vagrant, Gipsy	2	-	2	-	-	-	-	-	1	1	-	-	-
	Others of *undefined* Occupation	462	236	226	-	-	226	51	44	26	10	13	34	49
17.	1. Gentleman, Independent, Annuitant	73	-	73	-	-	-	1	2	1	3	3	21	18
18.	1. Scholars and Children of no stated Occupation	730	730	-	470	260	-	-	-	-	-	-	-	-

VIII.—NORTH WESTERN COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75 and upwds.
6.—*cont.*													
2. Pawnbroker	28	-	28	-	-	-	3	6	2	5	7	3	2
Shopkeeper (branch undefined), General Dealer	30	-	30	-	-	-	-	-	2	9	7	3	4
Hawker, Pedlar	147	1	146	-	-	1	7	14	18	25	28	25	15
7. 1. Railway Engine Driver, Stoker	32	3	29	-	-	3	5	13	4	3	4	-	-
Railway Officer, Clerk, Station-master	48	4	44	-	-	4	3	14	10	3	6	2	1
Railway Attendant, Servant	149	16	133	-	1	15	18	32	31	20	10	6	6
2. Toll-Collector, Turnpike-gate Keeper	12	-	12	-	-	-	-	1	1	1	-	5	4
Coach, Omnibus, Cab Owner, Livery Stable Keeper	25	-	25	-	-	-	-	5	6	9	3	1	1
Coachman (not domestic), Cabman, Flyman	121	-	121	-	-	-	13	24	20	23	15	10	7
Carman, Carrier, Carter, Drayman	534	14	520	-	2	12	37	100	89	96	91	61	29
3. Inland Navigation Service	20	-	20	-	-	-	-	3	2	5	3	5	2
Bargeman, Waterman	140	5	135	-	-	5	10	25	14	14	28	28	11
Others	1	-	1	-	-	-	-	-	1	-	-	-	-
4. Shipowner	5	-	5	-	-	-	-	-	-	1	3	1	-
Steam Navigation Service	27	-	27	-	-	-	1	10	7	6	1	1	1
Ship Steward, Cook	37	3	34	-	-	3	3	9	11	7	4	-	-
Seamen (Merchant Service)	402	14	388	-	-	14	53	97	96	69	26	24	9
Pilot	7	-	7	-	-	-	-	1	2	-	3	1	-
Harbour, Dock Service, Labourer	157	2	155	-	-	2	12	23	40	32	23	22	1
Wharfinger	4	-	4	-	-	-	-	-	1	1	-	-	2
Others	28	3	25	-	-	3	1	6	9	6	2	1	-
5. Warehouseman	216	13	203	-	-	13	20	36	43	47	32	19	6
Meter, Weigher	2	-	2	-	-	-	-	-	1	-	1	-	-
6. Messenger, Porter, Errand Boy	305	20	285	-	2	18	17	52	48	54	62	40	12
Cotton Porter	70	1	69	-	-	1	3	7	15	16	11	13	3
Telegraph Company Service	3	1	2	-	-	1	-	-	1	1	-	-	-
IV.—Agricultural Class.													
8. 1. Land Proprietor (so returned)	29	-	29	-	-	-	-	-	1	2	3	10	13
Farmer, Grazier	713	1	712	-	-	1	5	26	44	64	109	287	257
Farmer's Son, Brother, Grandson, Nephew	93	60	33	25	14	21	10	17	4	1	1	-	-
Farm Bailiff	10	-	10	-	-	-	-	-	-	2	6	2	-
Agricultural Labourer	677	13	664	1	1	11	17	41	38	88	120	164	176
Shepherd (out-door)	2	-	2	-	-	-	-	-	-	-	-	-	2
Farm Servant (in-door)	48	16	32	-	3	13	6	3	4	7	1	11	-
Land Surveyor, Estate Agent	25	-	25	-	-	-	-	4	5	1	4	7	4
Land Drainage Service	4	-	4	-	-	-	-	1	-	3	-	-	-
Others engaged in *Agriculture*	1	-	1	-	-	-	-	1	-	-	-	-	-
2. Woodman	1	-	1	-	-	-	-	-	-	-	-	-	1
3. Nurseryman, Seedsman, Florist	4	-	4	-	-	-	1	-	-	1	-	1	1
Gardener	214	-	214	-	-	-	8	21	18	40	35	54	43
9. 1. Horse Proprietor, Dealer	8	-	8	-	-	-	-	2	1	2	-	1	2
Horse Breaker	7	-	7	-	-	-	1	1	2	2	-	1	-
Horsekeeper, Groom, Jockey	58	5	53	-	-	5	5	17	5	11	7	3	-
Farrier, Veterinary Surgeon	18	1	17	-	-	1	1	7	2	1	3	1	2
Cattle, Sheep, Pig, Salesman	20	-	20	-	-	-	-	-	-	6	4	7	3
Drover	9	-	9	-	-	-	1	1	3	1	1	1	1
Gamekeeper	24	-	24	-	-	-	3	2	-	4	2	4	9
Vermin Destroyer	1	-	1	-	-	-	-	-	1	-	-	-	-
Fisherman	13	-	13	-	-	-	-	5	2	2	-	1	1
Others engaged about *Animals*	3	-	3	-	-	-	-	1	1	-	-	-	1
V.—Industrial Class.													
10. 1. Bookseller, Publisher	10	1	9	-	-	1	-	1	2	1	4	1	-
Bookbinder	15	1	14	-	-	1	-	3	7	3	1	-	-
Printer	78	4	74	-	-	4	18	14	11	13	6	8	4
Newspaper Agent, News-room Keeper	13	1	12	-	-	1	1	-	4	3	1	3	-
Others engaged in *Publications*	4	-	4	-	-	-	-	-	2	2	-	-	-
2. Musical Instrument Maker, Dealer	1	-	1	-	-	-	-	-	-	1	-	-	-
Others	1	-	1	-	-	-	-	-	-	-	-	-	1
3. Lithographer, Lithographic Printer	12	2	10	-	-	2	2	4	1	2	1	-	-
Others	3	-	3	-	-	-	-	-	1	-	1	-	1
4 Wood-carver	6	-	6	-	-	-	1	2	1	2	-	-	-
Others	1	-	1	-	-	-	-	1	-	-	-	-	-
5. Toy Maker, Dealer	2	-	2	-	-	-	-	-	1	-	1	-	-
Others	2	-	2	-	-	-	-	1	-	-	1	-	-

VIII.—NORTH WESTERN COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwds.
11.—*cont.*													
5. Hairdresser, Wig Maker	44	–	44	–	–	–	3	4	15	7	9	5	1
Hatter, Hat Manufacture	149	3	146	–	–	3	7	15	11	24	26	29	28
Straw Plait Manufacture	1	–	1	–	–	–	–	–	–	1	–	–	–
Furrier, Skinner	5	1	4	–	–	1	1	1	–	–	2	–	–
Tailor	411	7	404	–	–	7	26	56	73	95	75	56	26
Milliner	1	–	1	–	–	–	–	–	–	–	1	–	–
Hosiery Manufacture	3	–	3	–	–	–	–	–	–	–	–	3	–
Hosier, Haberdasher	6	–	6	–	–	–	1	1	2	1	–	1	–
Shoemaker, Bootmaker	558	12	546	–	–	12	25	42	78	89	112	118	68
Patten, Clog Maker	3	–	3	–	–	–	2	–	1	–	–	–	–
Button Maker	1	–	1	–	–	–	–	–	1	–	–	–	–
Umbrella, Parasol, Stick, Maker	13	–	13	–	–	–	2	2	3	–	1	3	–
Laundry Keeper	2	–	2	–	–	–	–	–	–	–	1	–	1
Others providing *Dress*	18	–	18	–	–	–	–	–	5	3	4	5	1
6. Mat Maker, Seller	2	–	2	–	–	–	–	–	–	1	1	–	–
Hemp Manufacture	1	–	1	–	–	–	–	1	–	–	–	–	–
Rope, Cord, Maker	54	1	53	–	–	1	1	10	5	8	14	10	5
Canvas, Sailcloth, Manufacture, Dealer	2	–	2	–	–	–	–	–	–	–	–	1	1
Sacking, Sack, Bag, Maker, Dealer	2	–	2	–	–	–	–	–	–	1	1	–	–
12. 1. Cowkeeper, Milkseller	41	1	40	–	–	1	–	5	4	9	14	4	4
Cheesemonger	4	2	2	–	–	2	1	–	–	–	–	1	–
Butcher, Meat Salesman	214	2	212	–	–	2	11	29	43	40	26	37	16
Provision Curer, Dealer	116	1	115	–	–	1	5	9	14	29	23	22	13
Poulterer, Game Dealer	11	–	11	–	–	–	–	2	2	3	2	1	1
Fishmonger	38	–	38	–	–	–	1	12	6	8	8	3	–
2. Corn, Flour, Seed, Merchant, Dealer	53	1	52	–	–	1	–	11	4	12	9	11	5
Miller	45	1	44	–	–	1	3	4	6	6	12	8	3
Baker	104	2	102	–	–	2	5	18	26	14	23	14	2
Confectioner, Pastry Cook	28	2	26	–	–	2	2	2	4	7	3	1	2
Greengrocer, Fruit, Vegetable, Dealer	58	1	57	–	–	1	–	5	14	11	13	12	3
Others	8	–	8	–	–	–	–	–	2	1	2	3	–
3. Maltster	6	–	6	–	–	–	–	1	–	–	4	–	1
Brewer	109	–	109	–	–	–	3	17	24	21	25	16	3
Wine and Spirit Merchant	25	–	25	–	–	–	2	7	5	4	3	2	2
Cellarman	16	2	14	–	–	2	–	5	4	3	1	–	1
Ginger Beer, Soda Water, &c., Manufacture	11	–	11	–	–	–	–	3	5	1	1	1	–
Sugar Refiner	8	–	8	–	–	–	–	–	4	1	3	–	–
Grocer, Tea Dealer	207	8	199	–	–	8	16	21	25	29	26	30	23
Tobacco, Cigar, Snuff, Manufacture, Tobacconist	23	1	22	–	–	1	–	7	6	5	1	1	2
Others	10	–	10	–	–	–	–	1	3	1	1	3	1
13. 1. Soap Boiler	5	–	5	–	–	–	–	1	–	2	1	1	–
Tallow Chandler	10	–	10	–	–	–	1	1	2	3	2	1	–
Comb-maker	1	–	1	–	–	–	–	1	–	–	–	–	–
Others	8	1	7	–	–	1	1	–	1	1	1	3	–
2. Tanner	17	1	16	–	–	1	–	1	2	1	2	3	2
Currier	22	–	22	–	–	–	1	3	7	1	3	6	1
Leather Case, Portmanteau, Bag Maker	3	–	3	–	–	–	–	–	1	–	1	–	1
Others	2	–	2	–	–	–	–	–	–	–	1	1	–
3. Hair, Bristle, Manufacture	1	–	1	–	–	–	–	–	–	–	–	–	1
Brush, Broom, Maker	26	–	26	–	–	–	1	4	4	2	6	3	1
14. 1. Oil-miller, Refiner	2	–	2	–	–	–	–	1	–	–	–	–	1
Oil and Colourman	1	–	1	–	–	–	–	–	–	1	–	–	–
French-polisher	11	–	11	–	–	–	3	1	4	–	2	1	–
Japanner	3	–	3	–	–	–	–	–	1	1	1	–	–
India Rubber, Gutta Percha, Manufacture, Dealer	9	–	9	–	–	–	–	1	2	2	3	1	–
Floor Cloth Manufacture	7	–	7	–	–	–	–	2	2	1	1	–	1
Others	3	–	3	–	–	–	1	–	1	–	–	–	1
2. Timber, Wood, Merchant, Dealer	26	–	26	–	–	–	1	5	4	5	3	1	2
Sawyer	76	–	76	–	–	–	3	7	10	9	18	21	6
Lath, Fence, Hurdle, Maker	9	–	9	–	–	–	2	2	1	2	1	–	1
Wood, Turner, Worker	21	1	20	–	–	1	2	4	3	2	3	2	4
Box, Packing Case, Maker	19	2	17	–	–	2	3	6	3	3	1	–	1
Cooper, Hoop-maker and Bender	87	1	86	–	–	1	5	17	13	17	14	14	6
3. Cork Cutter, Manufacturer	7	–	7	–	–	–	–	1	4	–	2	–	–
4. Basket Maker	15	–	15	–	–	–	–	2	1	2	3	3	2
Hay and Straw Dealer	7	–	7	–	–	–	–	–	–	4	1	1	1
Thatcher	2	–	2	–	–	–	1	–	–	–	–	–	1
Others	1	–	1	–	–	–	–	1	–	–	–	–	–
5. Rag Gatherer, Dealer	15	1	14	–	1	–	–	–	1	3	4	3	1
Paper Manufacture	30	–	30	–	–	–	2	6	9	3	6	1	3
Stationer (not Law)	16	–	16	–	–	–	1	1	–	4	4	4	2
Paper Stainer	6	–	6	–	–	–	1	–	1	1	1	2	–
Other Workers in *Paper*	13	–	13	–	–	–	–	5	2	1	4	1	–

IX.—YORKSHIRE.—Deaths of Males of different Occupations registered in the Year 1871.

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwards.
Total of Males aged 5 years and upwards	16033	2560	13473	1141	596	823	973	1798	1855	2069	2833	2889	1395
I.—Professional Class.													
1. 1. Civil Service	29	–	29	–	–	–	1	4	7	–	4	6	7
Government Messengers, Workmen, &c.	16	–	16	–	–	–	–	3	1	1	3	3	5
2. Magistrate (so returned)	3	–	3	–	–	–	–	–	–	–	1	2	–
Officer of Law Court	4	–	4	–	–	–	–	–	1	–	2	1	–
Police	37	1	36	–	–	1	3	13	9	5	2	3	1
Prison Officer	3	–	3	–	–	–	–	–	–	–	2	–	1
Municipal, Parish, Union, Officer	21	–	21	–	–	–	–	1	–	6	6	4	4
Other *Local Government* Officers	2	–	2	–	–	–	–	–	–	–	1	–	1
2. 1. Army Officer (effective)	2	–	2	–	–	–	–	–	1	–	1	–	–
Army Retired and Half Pay Officer	4	–	4	–	–	–	–	–	1	1	–	2	–
Soldier	43	1	42	–	–	1	5	12	13	4	4	2	1
Militia, Volunteers	6	–	6	–	–	–	–	–	2	2	–	–	2
Army Pensioner	34	–	34	–	–	–	–	–	3	7	9	3	12
2. Seaman, R.N.	4	–	4	–	–	–	2	2	–	–	–	–	–
Royal Marine	4	–	4	–	–	–	–	1	2	1	–	–	–
Coastguard, Royal Naval Reserve	3	–	3	–	–	–	–	–	–	1	–	2	–
Navy Pensioner	3	–	3	–	–	–	–	–	–	–	–	2	1
3. 1. Clergyman	28	–	28	–	–	–	1	1	2	6	2	11	5
Protestant Minister	13	–	13	–	–	–	1	1	1	–	2	4	4
Roman Catholic Priest	1	–	1	–	–	–	–	–	–	–	–	–	1
Missionary, Scripture Reader	2	–	2	–	–	–	–	1	–	–	1	–	–
Church, Chapel Officer	7	–	7	–	–	–	–	–	–	4	–	1	2
Others	2	1	1	–	–	1	–	1	–	–	–	–	–
2. Barrister	1	–	1	–	–	–	–	–	–	1	–	–	–
Solicitor, Attorney	24	1	23	–	–	1	1	2	2	5	8	3	2
Law Clerk	26	3	23	–	1	2	7	8	2	3	–	1	2
Law Stationer	1	–	1	–	–	–	–	–	–	–	–	1	–
3. Physician, Surgeon	30	–	30	–	–	–	2	4	4	2	6	8	4
Medical-Assistant, Student	8	1	7	–	–	1	3	–	1	2	–	1	–
Dentist	4	–	4	–	–	–	1	1	–	–	1	1	–
Chemist, Druggist	40	–	40	–	–	–	9	6	6	5	8	5	1
Others	1	–	1	–	–	–	–	–	–	–	–	–	1
4. Author, Editor, Journalist	2	–	2	–	–	–	–	1	–	–	–	–	1
Students and *Others*	2	–	2	–	–	–	–	1	–	1	–	–	–
5. Painter, Artist	8	–	8	–	–	–	–	1	2	–	1	2	2
Sculptor	1	–	1	–	–	–	–	–	–	–	1	–	–
Engraver	11	–	11	–	–	–	2	1	2	–	2	4	–
Photographer	2	–	2	–	–	–	–	–	2	–	–	–	–
6. Musician, Music Master	35	3	32	–	–	3	4	6	7	7	3	2	3
7. Actor	4	1	3	–	–	1	–	3	–	–	–	–	–
Exhibitions, Shows, Service	3	–	3	–	–	–	–	1	1	–	1	–	–
Others engaged in *Theatres, &c.*	4	–	4	–	–	–	–	2	1	–	1	–	–
8. Schoolmaster	57	–	57	–	–	–	8	7	3	8	12	13	11
Teacher, Professor, Lecturer	5	3	2	–	–	3	–	–	–	1	–	1	–
9. Civil Engineer	4	–	4	–	–	–	–	–	1	–	–	2	1
Other *Scientific* Persons	2	–	2	–	–	–	–	–	–	–	–	2	–
II.—Domestic Class.													
5. 1. Inn Keeper, Hotel Keeper, Publican	239	5	234	–	–	5	3	16	42	73	39	35	26
Beerseller	37	–	37	–	–	–	–	1	4	13	11	2	6
Lodging-house, Boarding-house, Kpr.	7	–	7	–	–	–	–	1	–	–	1	3	2
Coffee-house, Eating-house, Keeper	2	–	2	–	–	–	–	–	–	1	–	–	1
Institution Service	7	–	7	–	–	–	1	1	2	2	1	–	–
Others	1	–	1	–	–	–	–	–	–	–	–	1	–
2. Domestic Servant (General)	38	1	37	–	–	1	2	8	5	1	3	10	3
Coachman	12	1	11	–	–	1	–	1	4	1	2	1	2
Groom	2	–	2	–	–	–	–	–	1	–	–	–	1
Gardener	9	–	9	–	–	–	1	1	–	2	1	3	1
Inn, Hotel Servant	37	1	36	–	1	–	2	7	8	6	3	9	1
Others	1	–	1	–	–	–	–	1	–	–	–	–	–

Note.—This Table comprises the West Riding, East Riding (with York), and North Riding.

IX.—YORKSHIRE.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

	OCCUPATIONS.	AGES OF MALES.											
		Total.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	[illegible]	25—	35—	45—	55—	65—
	V.—Industrial Class.												
10.	1. Bookseller, Publisher	9	1	8	-	-	1	-	-	-	1	1	3
	Bookbinder	5	-	5	-	-	-	-	-	1	-	1	3
	Printer	45	4	41	-	-	4	8	8	5	11	3	2
	Newspaper Agent, News-room Keeper	11	1	10	-	-	1	-	-	1	3	1	1
	Others engaged in *Publications*	1	-	1	-	-	-	-	-	1	-	-	-
	2. Musical Instrument Maker, Dealer	4	1	3	-	1	-	1	-	-	1	-	1
	3. Lithographer, Lithographic Printer	4	1	3	-	-	1	-	-	1	2	-	-
	Others	1	-	1	-	-	-	-	-	-	-	-	1
	4. Wood-carver	2	-	2	-	-	-	-	1	-	-	-	1
	5. Toy Maker, Dealer	4	1	3	-	1	-	1	-	-	-	1	1
	7. Watch Maker, Clock Maker	21	3	18	-	-	3	1	5	2	-	3	3
	Philosophical Instrument Maker; Optician	5	-	5	-	-	-	-	-	1	1	1	1
	Weighing Machine, Scale, Measure, Mkr.	6	2	4	-	-	2	-	-	2	2	-	-
	8. Surgical Instrument Maker	5	1	4	-	-	1	-	-	-	-	2	1
	9. Gunsmith, Gun Manufacturer	4	1	3	-	-	1	-	1	-	-	1	-
	10. Engine and Machine Maker	244	11	233	-	-	11	30	37	37	34	35	25
	Spinning, Weaving, Machine Maker	46	4	42	-	-	4	8	5	6	8	13	3
	Agricultural Implement, Machine Mkr.	10	-	10	-	-	-	1	1	3	1	2	1
	Millwright	29	1	28	-	-	1	2	4	2	4	6	3
	Tool Maker, Dealer	41	3	38	-	-	3	4	5	5	9	10	4
	File Maker, Dealer	121	7	114	-	-	7	7	24	19	25	21	12
	Saw Maker, Dealer	21	1	20	-	-	1	1	7	3	3	2	3
	Cutler	173	8	165	-	1	7	15	24	16	49	33	20
	Scissors Maker	25	1	23	-	-	1	2	3	2	2	5	8
	Pin Manufacturer	3	-	3	-	-	-	-	-	1	-	-	1
	Others engaged in *Tool-making, &c.*	3	-	3	-	-	-	-	-	-	1	-	1
	11. Coachmaker	24	1	23	-	-	1	4	5	1	5	3	3
	Wheelwright	38	-	38	-	-	-	2	1	5	7	10	8
	Others engaged about *Carriages*	7	-	7	-	-	-	1	1	1	2	2	-
	13. Saddler, Harness, Whip Maker	38	-	38	-	-	-	2	1	4	8	3	6
	12. Ship-builder, Shipwright, Boat-builder	55	-	55	-	-	-	3	6	3	10	13	10
	Sail Maker	7	-	7	-	-	-	-	-	-	1	-	2
	Others	1	-	1	-	-	-	-	-	-	-	-	1
	14. House Proprietor	28	-	28	-	-	-	-	1	2	4	3	7
	Architect	7	-	7	-	-	-	-	1	-	2	1	1
	Builder	25	-	25	-	-	-	-	1	4	6	5	4
	Carpenter, Joiner	307	7	300	-	-	7	21	32	28	67	52	43
	Bricklayer	91	7	84	-	2	5	6	10	11	13	13	11
	Marble Mason	6	-	6	-	-	-	1	1	4	-	1	-
	Mason, Pavior	404	11	393	-	-	11	15	70	79	83	90	55
	Slater, Tiler	6	-	6	-	-	-	1	2	1	3	1	-
	Plasterer	56	1	55	-	-	1	3	15	7	14	7	6
	Paperhanger	3	-	3	-	-	-	-	-	1	2	-	-
	Plumber, Painter, Glazier	131	5	126	-	1	4	10	20	21	27	21	12
	15. Cabinet Maker, Upholsterer	72	4	68	-	-	4	3	13	10	7	10	11
	Carver and Gilder	8	-	8	-	-	-	1	2	-	2	2	1
	Furniture Broker, Dealer	9	-	9	-	-	-	1	-	1	2	3	1
	16. Manufacturing Chemist, Labourer	16	-	16	-	-	-	-	3	3	3	1	2
	Dye, Colour Manufacture	21	1	20	-	-	1	4	5	1	2	4	3
	Dyer, Scourer, Calenderer	56	3	53	-	-	3	3	10	10	7	13	6
	Others	15	-	15	-	-	-	-	2	2	4	4	3
11.	1.	17	-	17	-	-	-	1	2	5	3	2	1
		6	-	6	-	-	-	-	1	-	1	1	-
		1006	68	938	1	9	58	68	125	84	119	165	116
		22	-	22	-	-	-	3	5	3	1	2	2
		123	12	111	2	4	16	13	17	9	18	15	6
		17	1	16	-	-	1	1	3	1	4	3	2
		14	3	11	-	-	3	1	2	1	-	2	1
		4	-	4	-	-	-	-	-	-	2	1	1
		35	-	35	-	-	-	2	2	4	4	7	6
		61	6	55	-	-	6	10	11	7	9	6	6
	2. Silk, Satin, Manufacture	37	-	37	-	-	-	1	3	3	6	5	6
	3. Flax, Linen Manufacture	147	3	144	-	-	3	10	7	13	20	35	31
	Lace Manufacture	1	-	1	-	-	-	-	-	-	-	-	1
	Thread Manufacture	3	-	3	-	-	-	-	-	-	-	-	-
	Cotton Manufacture	291	32	259	-	1	31	24	33	26	24	49	35
	Fustian Manufacture	3	-	3	-	-	-	-	-	2	1	1	-
	Calico, Cotton, Printer	4	1	3	-	1	-	1	1	-	-	1	-
	Calico, Cotton, Dyer	4	-	4	-	-	-	-	-	-	-	1	1

IX.—YORKSHIRE.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

	OCCUPATIONS	AGES OF MALES. Total.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75 and upwards.
15. 1.	Coal Miner	456	36	420	-	6	30	47	90	78	57	51	63	34
	Lead Miner	18	1	17	-	-	1	1	1	4	3	5	2	1
	Iron Miner	74	5	69	-	-	5	12	16	15	13	6	6	1
	Miner (branch undefined)	34	4	30	-	1	3	5	11	6	2	1	2	1
	Coal Mine Service	16	1	15	-	-	1	-	-	3	1	4	7	-
	Mine Service (Metal not stated)	1	-	1	-	-	-	-	-	1	-	-	-	-
	Others	8	-	8	-	-	-	1	1	2	2	1	-	1
2.	Coal Merchant, Dealer	37	-	37	-	-	-	3	2	1	5	9	9	8
	Coal-heaver, Labourer	50	8	42	-	3	5	4	7	4	11	4	6	6
	Chimney Sweeper	5	-	5	-	-	-	-	-	-	3	2	-	-
	Gas Works Service	26	1	25	-	-	1	1	1	7	3	7	6	-
3.	Stone Quarrier	169	9	160	-	-	9	6	26	32	40	26	21	9
	Stone Merchant, Cutter, Dresser	31	1	30	-	1	-	4	5	3	9	6	2	1
	Limestone Quarrier, Lime-Burner	17	1	16	-	-	1	1	1	3	2	3	4	2
	Clay Labourer	5	1	4	-	-	1	-	-	1	1	-	1	1
	Brick Maker, Dealer	55	4	51	1	-	3	5	5	5	6	14	7	5
	Railway Labourer, Platelayer, Navvy	155	3	152	-	1	2	19	40	32	29	22	7	3
	Road Contractor, Inspector, Surveyor	8	-	8	-	-	-	-	1	-	2	2	2	1
	Road Labourer	40	1	39	-	1	-	-	1	1	1	11	15	10
	Scavenger, Dust Collector	5	-	5	-	-	-	-	-	-	1	2	1	1
	Others	5	-	5	-	-	-	-	2	1	1	-	1	-
4.	Earthenware Manufacture	41	2	39	-	-	2	1	4	9	11	5	9	-
	Tobacco-pipe Maker	9	-	9	-	-	-	-	2	1	2	2	1	1
	Earthenware and Glass Dealer	11	-	11	-	-	-	2	-	4	-	1	4	-
5.	Glass Manufacture	35	-	35	-	-	-	7	12	6	2	3	5	-
6.	Salt Manufacture	2	-	2	-	-	-	-	-	-	1	-	1	-
	Other Dealers in *Salt*	2	-	2	-	-	-	-	-	-	1	1	-	-
7.	Waterworks Service	8	-	8	-	-	-	-	2	2	-	1	2	1
	Others	4	-	4	-	-	-	-	-	1	1	2	-	-
8.	Goldsmith, Silversmith, Jeweller	42	2	40	-	-	2	3	8	5	5	1	6	12
	Plater, Plated Ware Manufacture	4	-	4	-	-	-	1	-	-	3	-	-	-
9.	Copper Manufacture	2	-	2	-	-	-		-	-	1	-	1	-
	Coppersmith	3	-	3	-	-	-	-	1	-	1	-	1	-
	Others	1	-	1	-	-	-	-	-	1	-	-	-	-
10.	Tin Manufacture	2	-	2	-	-	-	-	-	-	-	1	1	-
	Tinplate Worker, Tinman	21	-	21	-	-	-	5	1	1	6	4	3	1
	Tinker	1	-	1	-	-	-	-	-	-	1	-	-	-
12.	Lead Manufacture	10	-	10	-	-	-	-	1	2	3	2	2	-
13.	Brass Manufacture, Brazier	22	5	17	-	-	5	3	4	4	4	1	1	-
	Locksmith, Bellhanger	2	-	2	-	-	-	-	1	-	-	-	1	-
	Gas Fitter	7	-	7	-	-	-	1	3	2	1	-	-	-
	Wire Worker, Drawer	26	3	23	1	1	1	5	4	5	3	2	2	1
	Others	2	-	2	-	-	-	-	-	1	-	-	1	-
14.	Iron Manufacture	361	27	334	-	1	26	44	68	77	62	43	32	6
	Whitesmith	35	2	33	-	-	2	7	2	6	7	5	5	1
	Blacksmith	221	2	219	-	1	1	21	37	23	46	30	36	24
	Nail Manufacture	35	2	33	-	-	2	1	3	5	7	6	5	6
	Anchorsmith, Chainsmith	3	-	3	-	-	-	1	-	-	-	1	1	-
	Ironmonger, Hardware Dealer	51	1	50	-	-	1	5	4	4	10	17	7	3
	Steel Manufacture, Worker	45	5	40	-	-	5	3	9	12	8	6	2	-
	Others	7	-	7	-	-	-	-	1	1	3	2	-	-
	VI.—Indefinite and Non-productive Class.													
16. 1.	General Labourer, Labourer (branch undefined)	764	33	731	-	6	27	44	79	123	123	137	120	86
2.	Artizan, Mechanic (branch undefined)	52	4	48	-	-	4	9	12	9	6	4	3	1
	Engine Driver, Stoker (branch undef.)	9	2	7	-	-	2	1	-	4	1	1	-	-
	Factory Labourer (branch undefined)	21	8	13	-	2	6	3	1	1	2	1	3	2
	Apprentice (branch undefined)	1	1	-	-	-	1	-	-	-	-	-	-	-
	Vagrant, Gipsy	2	-	2	-	-	-	-	-	-	2	-	-	-
	Others of *undefined* Occupation	618	273	345	-	-	273	47	41	33	11	19	12	4
17. 1.	Gentleman, Independent, Annuitant	34	-	34	-	-	-	3	4	5	5	5	12	-
18. 1.	Scholars and Children of no stated Occupation	1653	1653	-	1135	518	-	-	-	-	-	-	-	-

X.—NORTHERN COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75 and upwds.
7. 1. Railway Engine Driver, Stoker	20	4	16	-	-	4	5	7	3	1	-	-	-
Railway Officer, Clerk, Station-master	27	2	25	-	-	2	5	7	2	2	3	4	2
Railway Attendant, Servant	65	5	60	-	-	5	9	23	9	4	6	7	2
2. Toll Collector, Turnpike-gate Keeper	7	-	7	-	-	-	1	1	-	-	3	2	-
Coach, Omnibus, Cab Owner, Livery Stable Keeper	7	-	7	-	-	-	-	1	2	1	1	2	-
Coachman (not domestic), Cabman, Flyman	24	-	24	-	-	-	1	5	6	5	2	3	2
Carman, Carrier, Carter, Drayman	129	2	127	-	-	2	10	19	16	26	20	18	16
3. Inland Navigation Service	4	-	4	-	-	-	-	1	1	2	-	-	-
Bargeman, Waterman	43	-	43	-	-	-	2	5	4	7	8	10	7
4. Shipowner	25	-	25	-	-	-	-	-	1	8	2	10	4
Steam Navigation Service	27	1	26	-	1	-	2	12	5	4	1	1	1
Ship Steward, Cook	8	1	7	-	-	1	2	2	-	-	1	2	-
Seaman (Merchant Service)	404	24	380	-	3	21	42	78	70	59	43	44	44
Pilot	21	-	21	-	-	-	-	3	4	4	2	7	1
Harbour, Dock Service, Labourer	30	1	29	-	-	1	3	1	6	3	5	5	1
Others	13	-	13	-	-	-	3	3	3	1	2	1	-
5. Warehouseman	6	-	6	-	-	-	1	1	1	2	-	1	-
6. Messenger, Porter, Errand Boy	9	4	5	-	1	3	-	-	2	1	1	1	-
Telegraph Company Service	6	2	4	-	-	2	2	1	1	-	-	-	-
IV.—Agricultural Class.													
8. 1. Land Proprietor (so returned)	53	-	53	-	-	-	-	1	4	5	6	13	24
Farmer, Grazier	432	-	432	-	-	-	3	18	40	83	69	111	108
Farmer's Son, Brother, Grandson, Nephew	20	4	16	-	-	4	9	5	1	1	-	-	-
Farm Bailiff	19	-	19	-	-	-	-	1	1	3	4	6	4
Agricultural Labourer	554	19	535	-	1	18	36	39	47	42	78	134	139
Shepherd (out-door)	21	1	20	-	-	1	2	1	-	1	1	6	9
Land Surveyor, Estate Agent	9	-	9	-	-	-	-	-	-	1	2	3	3
Land Drainage Service	10	-	10	-	-	-	-	4	4	-	2	-	-
2. Woodman	18	1	17	-	-	1	-	1	1	3	-	6	6
3. Gardener	71	1	70	-	-	1	4	5	5	8	14	16	18
9. 1. Horse Proprietor, Dealer	6	-	6	-	-	-	-	2	1	1	-	2	-
Horse Breaker	3	-	3	-	-	-	-	-	-	1	1	-	1
Horsekeeper, Groom, Jockey	31	-	31	-	-	-	-	5	5	6	7	6	2
Farrier, Veterinary Surgeon	6	-	6	-	-	-	-	1	-	-	-	5	-
Cattle, Sheep, Pig, Salesman	18	-	18	-	-	-	-	3	-	7	3	3	2
Drover	9	-	9	-	-	-	-	-	1	2	2	1	2
Gamekeeper	13	-	13	-	-	-	1	-	-	1	4	3	2
Vermin Destroyer	1	-	1	-	-	-	-	-	-	-	-	-	1
Fisherman	28	2	26	-	-	2	3	4	1	4	1	6	1
Others engaged about *Animals*	2	-	2	-	-	-	-	-	1	-	-	-	1
V.—Industrial Class.													
10. 1. Bookseller, Publisher	6	-	6	-	-	-	-	1	-	1	1	2	1
Bookbinder	4	-	4	-	-	-	-	-	2	-	1	1	-
Printer	28	5	23	-	-	5	6	4	5	2	3	1	2
Newspaper Agent, News-room Keeper	1	-	1	-	-	-	-	-	1	-	-	-	-
Others engaged in *Publications*	1	-	1	-	-	-	-	-	-	-	-	1	-
4. Wood-carver	1	-	1	-	-	-	-	-	-	-	-	1	-
Others	1	-	1	-	-	-	-	-	-	1	-	-	-
7. Watch Maker, Clock Maker	17	-	17	-	-	-	4	2	-	3	4	4	-
Philosophical Instrument Maker; Optician	2	-	2	-	-	-	1	-	-	1	-	-	-
Weighing Machine, Scale, Measure, Maker	1	-	1	-	-	-	-	-	-	-	1	-	-
9. Others engaged in *Arms*	2	-	2	-	-	-	-	1	-	-	-	-	1
10. Engine and Machine Maker	201	19	182	-	-	19	30	58	44	22	17	5	6
Spinning, Weaving, Machine Maker	5	-	5	-	-	-	-	1	1	-	2	-	1
Agricultural Implement, Machine Maker	5	1	4	-	-	1	-	-	1	1	1	-	1
Millwright	14	1	13	-	-	1	2	3	2	4	1	1	-
Tool Maker, Dealer	2	-	2	-	-	-	-	-	1	-	-	1	-
File Maker, Dealer	4	-	4	-	-	-	-	1	1	1	1	-	-
Cutler	2	-	2	-	-	-	-	-	1	-	-	-	1
11. Coachmaker	8	-	8	-	-	-	1	2	2	-	-	2	1
Wheelwright	14	-	14	-	-	-	3	-	-	2	-	2	7
12. Saddler, Harness, Whip Maker	16	2	14	-	-	2	3	1	1	3	-	4	2
13. Shipbuilder, Shipwright, Boat-builder	241	12	229	-	-	12	27	37	46	32	31	24	22
Sail Maker	14	-	14	-	-	-	-	1	3	2	4	2	2
Others	1	-	1	-	-	-	-	-	-	-	-	1	-

X.—NORTHERN COUNTIES.—Deaths of Males of different Occupations registered in the Year 1871—*continued.*

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwds.
14. 1. Oil-miller, Refiner	2	–	2	–	–	–	2	–	–	–	–	–	–
French-polisher	1	–	1	–	–	–	–	–	–	1	–	–	–
2. Timber, Wood, Merchant, Dealer	11	–	11	–	–	–	1	2	1	1	2	4	–
Sawyer	32	–	32	–	–	–	3	3	–	5	8	7	6
Lath, Fence, Hurdle, Maker	2	–	2	–	–	–	–	–	1	–	–	–	1
Wood, Turner, Worker	7	–	7	–	–	–	–	1	1	2	–	3	–
Box, Packing Case, Maker	1	–	1	–	–	–	–	–	1	–	–	–	–
Cooper, Hoop Maker and Bender	32	3	29	–	–	3	2	5	4	4	3	7	4
3. Cork Cutter, Manufacturer	1	–	1	–	–	–	–	–	–	–	1	–	–
4. Basket Maker	3	–	3	–	–	–	–	–	–	1	1	–	1
Thatcher	1	–	1	–	–	–	–	–	–	–	–	–	1
5. Rag Gatherer, Dealer	4	–	4	–	–	–	–	–	–	–	1	–	3
Paper Manufacture	10	1	9	–	–	1	2	–	2	1	–	2	1
Stationer (not Law)	3	–	3	–	–	–	1	1	–	–	1	–	–
Paper Stainer	2	–	2	–	–	–	–	–	–	–	1	1	–
Other Workers in *Paper*	3	–	3	–	–	–	–	1	–	–	2	–	–
15. 1. Coal Miner	1040	116	924	1	28	87	121	176	128	139	140	145	55
Lead Miner	94	2	92	–	–	2	6	11	18	22	25	7	3
Iron Miner	48	2	46	–	–	2	7	14	6	11	5	2	1
Miner (branch undefined)	8	–	8	–	–	–	1	3	1	1	1	1	–
Coal Mine Service	19	2	17	–	–	2	4	3	2	2	5	–	1
Mine Service (Metal not stated)	2	–	2	–	–	–	–	–	–	1	–	1	–
2. Coal Merchant, Dealer	7	–	7	–	–	–	–	–	2	–	1	3	1
Coal-heaver, Labourer	102	10	92	–	3	7	5	17	10	17	13	20	10
Coke Burner, Dealer	43	3	40	–	3	–	8	11	9	5	6	1	–
Chimney Sweeper	6	–	6	–	–	–	–	1	–	1	2	1	1
Gas Works Service	13	1	12	–	–	1	3	4	–	2	1	1	1
Other Workers in *Coal*	1	–	1	–	–	–	–	–	–	1	–	–	–
3. Stone Quarrier	61	2	59	–	–	2	4	7	12	12	12	10	2
Stone, Merchant, Cutter, Dresser	1	–	1	–	–	–	–	–	–	–	1	–	–
Limestone Quarrier, Lime-burner	10	–	10	–	–	–	1	2	1	2	–	4	–
Clay Labourer	3	1	2	–	–	1	–	1	–	–	1	–	–
Brick Maker, Dealer	50	5	45	–	–	5	4	10	9	7	8	3	4
Railway Labourer, Platelayer, Navvy	144	10	134	–	–	10	14	32	26	24	25	8	5
Road Contractor, Inspector, Surveyor	3	–	3	–	–	–	–	–	–	–	–	1	2
Road Labourer	24	–	24	–	–	–	8	–	1	3	3	7	3
Scavenger, Dust Collector	1	–	1	–	–	–	–	1	–	–	–	–	–
Others	5	–	5	–	–	–	1	2	1	–	–	1	–
4. Earthenware Manufacture	30	1	29	–	–	1	2	4	4	6	7	4	2
Earthenware and Glass Dealer	3	–	3	–	–	–	–	1	–	–	2	–	–
5. Glass Manufacture	75	1	74	–	–	1	6	16	8	14	11	14	3
6. Salt Manufacture	1	–	1	–	–	–	–	–	1	–	–	–	–
7. Waterworks Service	17	3	14	–	1	2	2	2	3	2	2	3	–
Others	1	–	1	–	–	–	–	–	–	1	–	–	–
8. Goldsmith, Silversmith, Jeweller	6	–	6	–	–	–	–	2	–	–	1	3	–
Others	1	–	1	–	–	–	1	–	–	–	–	–	–
9. Copper Manufacture	5	–	5	–	–	–	1	–	2	–	–	–	2
Coppersmith	3	1	2	–	–	1	–	2	–	–	–	–	–
10. Tinplate Worker, Tinman	15	–	15	–	–	–	2	4	1	2	1	3	2
12. Lead Manufacture	10	–	10	–	–	–	–	2	3	2	2	1	–
13. Brass Manufacture, Brazier	16	1	15	–	–	1	4	3	1	1	3	3	–
Gas Fitter	2	–	2	–	–	–	–	1	–	1	–	–	–
Wire Worker, Drawer	4	–	4	–	–	–	–	1	2	–	–	1	–
14. Iron Manufacture	343	34	309	–	6	28	60	69	64	43	40	27	6
Whitesmith	10	–	10	–	–	–	2	1	1	–	1	2	3
Blacksmith	206	14	192	–	–	14	18	33	22	29	28	33	24
Nail Manufacture	18	–	18	–	–	–	–	2	–	2	4	4	6
Anchorsmith, Chainsmith	21	1	20	–	1	–	1	2	4	7	3	2	1
Ironmonger, Hardware Dealer	10	–	10	–	–	–	2	2	1	4	–	1	–
Steel Manufacture, Worker	5	2	3	–	–	2	1	1	–	–	1	–	–
Others	2	–	2	–	–	–	–	1	1	–	–	–	–
VI.—Indefinite and Non-productive Class.													
16. 1. General Labourer, Labourer (branch undefined)	733	31	702	–	3	28	77	126	123	97	114	80	76
2. Artizan, Mechanic (branch undefined)	7	–	7	–	–	–	1	2	1	2	1	–	–
Engine Driver, Stoker (branch undef.)	20	5	15	–	–	5	1	2	3	1	1	–	–
Factory Labourer (branch undefined)	1	–	1	–	–	–	1	–	–	–	–	–	–
Vagrant, Gipsy	3	–	3	–	–	–	–	1	1	–	–	1	–
Others of *undefined* Occupation	264	189	75	–	–	189	16	19	10	10	3	3	4
17. 1. Gentleman, Independent, Annuitant	58	–	58	–	–	–	2	3	4	3	13	9	19
18. 1. Scholars and Children of no stated Occupation	1520	1520	–	1061	459	–	–	–	–	–	–	–	–

XI.—MONMOUTHSHIRE AND WALES.—DEATHS of MALES of different OCCUPATIONS registered in the Year 1871—*continued.*

	OCCUPATIONS.	AGES OF MALES.											
		TOTAL.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75 and upwds.
7.	1. Railway Engine Driver, Stoker	8	1	7	-	-	1	2	4	1	-	-	-	-
	Railway Officer, Clerk, Station-master	13	1	12	-	-	1	4	2	3	2	1	-	-
	Railway Attendant, Servant	65	6	59	-	1	5	13	25	10	5	4	1	1
	2. Toll Collector, Turnpike-gate Keeper	4	-	4	-	-	-	1	-	1	-	-	2	-
	Coach, Omnibus, Cab Owner, Livery Stable Keeper	4	-	4	-	-	-	-	1	-	1	2	-	-
	Coachman (not domestic), Cabman, Flyman	23	2	21	-	-	2	3	3	3	4	1	5	3
	Carman, Carrier, Carter, Drayman	40	1	39	-	-	1	1	8	3	6	9	6	4
	3. Inland Navigation Service	6	-	6	-	-	-	-	1	-	1	1	1	1
	Bargeman, Waterman	17	1	16	-	-	1	-	4	4	3	1	2	1
	4. Shipowner	2	-	2	-	-	-	-	1	-	-	-	1	-
	Steam Navigation Service	14	-	14	-	-	-	1	6	4	3	-	-	-
	Ship Steward, Cook	4	1	3	-	-	1	1	1	-	-	1	-	-
	Seaman (Merchant Service)	255	14	241	-	-	14	30	61	44	33	32	19	12
	Pilot	19	-	19	-	-	-	1	2	3	2	2	7	2
	Boatman on Seas	4	-	4	-	-	-	-	-	-	-	1	-	3
	Harbour, Dock Service, Labourer	20	-	20	-	-	-	-	1	1	2	4	3	1
	Wharfinger	5	-	5	-	-	-	-	-	1	2	1	1	-
	Others	3	-	3	-	-	-	-	-	1	-	2	-	-
	5. Warehouseman	3	1	2	-	-	1	1	-	-	-	-	1	-
	Meter, Weigher	4	-	4	-	-	-	-	-	-	-	-	4	-
	6. Messenger, Porter, Errand Boy	6	1	5	-	-	1	-	2	-	1	-	2	-
	Telegraph Company Service	1	-	1	-	-	-	-	1	-	-	-	-	-
	IV.—AGRICULTURAL CLASS.													
8.	1. Land Proprietor (so returned)	33	-	33	-	-	-	-	1	2	2	8	8	12
	Farmer, Grazier	958	1	957	-	-	1	7	42	51	79	155	241	379
	Farmer's Son, Brother, Grandson, Nephew	56	-	56	-	-	-	28	23	2	3	-	-	-
	Farm Bailiff	18	-	18	-	-	-	-	1	1	4	2	5	5
	Agricultural Labourer	762	122	640	44	30	48	37	47	37	53	92	149	103
	Shepherd (out-door)	14	-	14	-	-	-	1	-	1	-	2	4	6
	Farm Servant (in-door)	60	12	48	-	1	11	12	15	4	2	4	4	7
	Land Surveyor, Estate Agent	6	-	6	-	-	-	-	1	1	1	-	1	2
	Land Drainage Service	1	-	1	-	-	-	-	-	-	1	-	-	-
	2. Woodman	15	1	14	-	-	1	1	1	2	1	2	1	6
	3. Nurseryman, Seedsman, Florist	2	-	2	-	-	-	-	1	-	-	1	-	-
	Gardener	65	-	65	-	-	-	1	5	6	6	13	20	14
9.	1. Horse Proprietor, Dealer	2	-	2	-	-	-	-	-	-	-	-	1	1
	Horse Breaker	3	-	3	-	-	-	-	-	-	-	2	-	1
	Horsekeeper, Groom, Jockey	31	-	31	-	-	-	2	3	6	7	6	3	4
	Farrier, Veterinary Surgeon	4	-	4	-	-	-	-	-	-	2	1	1	-
	Cattle, Sheep, Pig, Salesman	10	-	10	-	-	-	-	2	3	1	2	-	2
	Drover	1	-	1	-	-	-	-	-	-	-	-	1	-
	Gamekeeper	16	-	16	-	-	-	-	2	1	3	-	5	5
	Vermin Destroyer	3	-	3	-	-	-	-	-	-	-	2	-	1
	Fisherman	8	1	7	-	-	1	-	-	1	1	2	1	2
	Others engaged about *Animals*	3	-	3	-	-	-	-	-	1	1	1	-	-
	V.—INDUSTRIAL CLASS.													
10.	1. Bookseller, Publisher	3	-	3	-	-	-	1	-	-	-	1	1	-
	Bookbinder	6	-	6	-	-	-	-	1	1	-	2	1	1
	Printer	19	2	17	-	-	2	3	5	1	2	1	2	3
	Newspaper Agent, News-room Keeper	1	-	1	-	-	-	-	-	-	-	-	1	-
	5. Toy Maker, Dealer	1	-	1	-	-	-	-	-	1	-	-	-	-
	7. Watch Maker, Clock Maker	14	1	13	-	-	1	2	3	1	1	3	1	2
	Weighing Machine, Scale, Measure, Maker	1	-	1	-	-	-	-	-	-	-	1	-	-
	9. Gunsmith, Gun Manufacture	1	-	1	-	-	-	-	1	-	-	-	-	-
	10. Engine and Machine Maker	53	3	50	-	1	2	3	13	7	6	7	6	1
	Agricultural Implement, Machine Mkr.	1	-	1	-	-	-	-	-	1	-	-	-	-
	Millwright	9	1	8	-	-	1	-	-	1	1	1	1	4
	File Maker, Dealer	1	-	1	-	-	-	-	-	-	-	-	-	1
	Cutler	1	-	1	-	-	-	-	-	-	-	-	-	1
	11. Coachmaker	2	-	2	-	-	-	1	-	-	1	-	-	-
	Wheelwright	25	-	25	-	-	-	-	5	1	2	4	4	9
	Others engaged about *Carriages*	2	-	2	-	-	-	-	-	-	1	1	-	-

XI.—MONMOUTHSHIRE AND WALES.—DEATHS of MALES of different OCCUPATIONS registered in the Year 1871—*continued.*

OCCUPATIONS.	AGES OF MALES.												
	TOTAL.	5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwds.
14.—*cont.*													
4. Basket Maker	7	–	7	–	–	–	1	–	1	–	3	–	2
Hay and Straw Dealer	1	–	1	–	–	–	–	–	–	–	–	–	1
Thatcher	2	–	2	–	–	–	–	–	–	–	–	1	1
5. Rag Gatherer	4	–	4	–	–	–	–	1	–	1	1	–	1
Paper Manufacture	3	–	3	–	–	–	–	–	1	1	–	–	1
Stationer (not Law)	2	–	2	–	–	–	1	–	–	1	–	–	–
Paper Stainer	1	–	1	–	–	–	–	–	–	–	1	–	–
Other Workers in *Paper*	1	–	1	–	–	–	–	–	–	–	1	–	–
15. 1. Coal Miner	804	96	708	–	30	66	98	185	97	96	125	104	51
Copper Miner	25	2	23	–	–	2	1	1	1	4	4	4	2
Lead Miner	100	3	97	–	–	3	8	12	10	23	25	12	7
Iron Miner	110	2	108	–	–	2	11	13	8	15	25	18	15
Miner (branch undefined)	30	3	27	–	1	2	2	9	8	–	4	2	2
Coal Mine Service	21	1	20	–	–	1	1	3	1	4	5	5	1
Mine Service (Metal not stated)	7	–	7	–	–	–	–	–	1	4	1	1	–
Others	2	–	2	–	–	–	–	–	2	–	–	–	–
2. Coal Merchant, Dealer	14	–	14	–	–	–	–	1	1	3	1	3	3
Coal-heaver, Labourer	49	4	45	–	1	3	3	12	4	10	10	4	3
Coke Burner, Dealer	13	1	12	–	–	1	1	3	4	3	1	–	–
Chimney Sweeper	6	–	6	–	–	–	–	1	4	1	–	–	–
Gas Works Service	5	–	5	–	–	–	–	1	1	1	1	1	–
Other Workers in *Coal*	4	–	4	–	–	–	1	–	2	–	–	1	–
3. Stone Quarrier	74	–	74	–	–	–	9	13	7	13	15	10	7
Stone, Merchant, Cutter, Dresser	18	–	18	–	–	–	1	2	6	1	4	3	1
Slate Quarrier	151	13	138	–	1	12	27	22	21	20	19	17	13
Limestone Quarrier, Lime-Burner	16	1	15	–	–	1	–	1	2	3	3	2	2
Clay Labourer	1	–	1	–	–	–	–	–	–	1	–	–	–
Brick Maker, Dealer	17	–	17	–	–	–	1	5	4	1	–	1	5
Railway Labourer, Platelayer, Navvy	54	3	51	–	–	3	1	10	14	9	3	4	5
Road Labourer	33	–	33	–	–	–	–	1	1	3	4	11	13
Others	11	–	11	–	–	–	–	2	1	–	4	3	1
4. Earthenware Manufacture	8	–	8	–	–	–	–	1	2	2	2	1	–
Tobacco-pipe Maker	1	–	1	–	–	–	1	–	–	–	–	–	–
Earthenware and Glass Dealer	6	–	6	–	–	–	–	–	2	1	–	1	2
5. Glass Manufacture	1	–	1	–	–	–	–	–	–	–	–	1	–
6. Other Dealers in *Salt*	1	–	1	–	–	–	–	–	–	–	1	–	–
8. Goldsmith, Silversmith, Jeweller	6	–	6	–	–	–	2	2	–	1	–	1	–
Others	2	–	2	–	–	–	–	2	–	–	–	–	–
9. Copper Manufacture	57	3	54	–	–	3	4	7	10	8	11	12	2
Coppersmith	1	–	1	–	–	–	–	1	–	–	–	–	–
10. Tin Manufacture	36	8	28	–	3	5	11	3	4	2	1	2	–
Tinplate Worker, Tinman	30	5	25	–	–	5	4	6	1	4	4	5	1
11. Zinc Manufacture	2	–	2	–	–	–	–	–	1	1	–	–	–
12. Lead Manufacture	10	–	10	–	–	–	–	2	2	1	4	–	1
13. Brass Manufacture, Brazier	3	–	3	–	–	–	–	–	1	–	1	1	–
Locksmith, Bellhanger	2	–	2	–	–	–	–	–	–	–	2	–	–
Gas Fitter	3	1	2	–	–	1	–	–	1	–	–	1	–
Wire Worker, Drawer	2	–	2	–	–	–	–	1	–	–	1	–	–
14. Iron Manufacture	361	26	335	–	4	22	35	71	51	50	57	46	25
Blacksmith	182	10	172	–	–	10	16	29	12	34	26	26	20
Nail Manufacture	11	1	10	–	–	1	–	1	–	1	2	3	1
Anchorsmith, Chainsmith	4	–	4	–	–	–	–	–	1	1	–	2	–
Ironmonger, Hardware Dealer	10	–	10	–	–	–	3	4	2	–	1	–	–
Steel Manufacture, Worker	11	–	11	–	–	–	3	2	2	2	2	–	–
Others	1	–	1	–	–	–	–	1	–	–	–	–	–
VI.—INDEFINITE AND NON-PRODUCTIVE CLASS.													
16. 1. General Labourer, Labourer (branch undefined)	1011	40	971	–	7	33	61	95	106	119	164	212	223
2. Artizan, Mechanic (branch undefined)	2	–	2	–	–	–	–	2	–	–	–	–	–
Engine Driver, Stoker (branch undef.)	44	8	36	–	1	7	10	7	5	3	5	5	1
Factory Labourer (branch undefined)	2	–	2	–	–	–	–	–	2	–	–	–	–
Vagrant, Gipsy	6	–	6	–	–	–	2	1	–	1	2	–	–
Others of *undefined* Occupation	464	184	280	–	2	182	70	79	53	19	19	37	3
17. 1. Gentleman, Independent, Annuitant	70	1	69	–	–	1	–	4	7	9	13	20	11
18. 1. Scholars and Children of no stated Occupation	1019	1019	–	729	290	–	–	–	–	–	–	–	–

ENGLAND.—DEATHS of MALES of different OCCUPATIONS registered in EIGHTY TOWN DISTRICTS* in the Year 1871.

CLASSES, ORDERS, AND SUB-ORDERS.	AGES OF MALES.												
	TOTAL 5 Years and upwrds.	5 Years and under 20.	20 Years and upwrds.	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 and upwards.
TOTAL OF MALES AGED 5 YEARS AND UPWARDS	68,969	10,987	58,052	5,454	2,870	3,113	4,257	5,062	9,413	9,997	8,514	5,824	3,551
CLASSES.													
I. PROFESSIONAL CLASS	4,696	102	4,594	–	4	98	296	846	794	680	606	368	98
II. DOMESTIC CLASS	2,414	59	2,355	–	3	56	125	349	471	481	409	329	231
III. COMMERCIAL CLASS	9,412	422	8,990	–	23	399	749	1,768	1,710	1,648	1,362	1,157	774
IV. AGRICULTURAL CLASS	3,809	115	3,694	8	11	96	180	364	367	506	635	822	704
V. INDUSTRIAL CLASS	31,075	1,189	29,886	6	99	1,084	2,171	4,475	4,794	5,263	5,329	4,994	3,865
VI. INDEFINITE AND NON-PRODUCTIVE CLASS	17,563	9,050	8,513	5,440	2,230	1,380	706	1,290	1,362	1,316	1,441	1,049	698
ORDERS.													
Class I. 1. Persons engaged in the GENERAL or LOCAL GOVERNMENT *of the Country*	999	11	988	–	–	11	42	158	177	164	163	157	117
2. Persons engaged in the DEFENCE *of the Country*	1728	47	1681	–	1	46	123	373	305	231	196	289	217
3. Persons engaged in the LEARNED PROFESSIONS *or* in LITERATURE, ART, and SCIENCE (with their immediate Subordinates)	1969	44	1925	–	3	41	131	315	312	295	307	253	218
Class II. 5. Persons engaged in ENTERTAINING, *and performing* PERSONAL OFFICES *for Man*	2414	59	2355	–	3	56	125	349	471	481	410	339	217
Class III. 6. Persons who BUY *or* SELL, KEEP *or* LEND *Money, Houses, or Goods of* VARIOUS KINDS	2759	115	2644	–	2	113	190	495	460	451	420	309	254
7. Persons engaged in the CONVEYANCE *of Men, Animals, Goods, and Messages*	6653	307	6346	–	21	286	559	1273	1250	1189	982	747	639
Class IV. 8. Persons *possessing or working the* LAND, *and engaged in growing* GRAIN, FRUITS, GRASSES, ANIMALS, *and other Products*	2987	91	2896	8	9	74	79	205	231	355	456	476	403
9. Persons engaged about ANIMALS	822	24	798	–	2	22	51	159	136	150	127	115	83
Class V. 10. Persons engaged in ART *and* MECHANIC *Productions, in which Matters of various kinds are used in combination*	10897	390	10507	–	18	372	815	1651	1751	1849	1845	1652	1254
11. Persons *working and dealing in the* TEXTILE FABRICS and in DRESS	6717	214	6503	2	9	203	373	802	873	1155	1216	1302	846
12. Persons *working and dealing in* FOOD and DRINKS	4001	113	3888	–	2	111	254	599	699	656	679	652	435
13. Persons *working and dealing in* ANIMAL SUBSTANCES	583	17	566	–	1	16	36	67	96	98	109	104	63
14. Persons *working and dealing in* VEGETABLE SUBSTANCES	1396	42	1354	–	3	34	92	211	213	231	246	221	103
15. Persons *working and dealing in* MINERALS	7481	413	7068	4	61	348	901	1115	1162	1276	1235	1043	708
Class VI. 16. LABOURERS AND OTHERS—*Branch of labour undefined*	8875	1398	7482	–	18	1375	740	1247	1214	1216	1238	1139	891
17. Persons of RANK *or* PROPERTY *not returned under any Office or Occupation*	1056	5	1051	–	–	5	26	43	68	100	152	211	446
18. SCHOLARS AND CHILDREN *not engaged in any directly* PRODUCTIVE OCCUPATION	7652	7652	–	5440	2212	–	–	–	–	–	–	–	–
SUB-ORDERS.													
Order I. Class I. 1. 1. Officers of National Government	547	9	538	–	–	9	21	63	82	93	97	75	49
2. Officers of Local Government	436	2	434	–	–	2	21	90	93	70	63	53	42
3. Officers of East India and Colonial Government	16	–	16	–	–	–	–	–	2	1	4	2	7
2. 1. Army	1105	22	1083	–	–	22	75	259	209	140	113	136	129
2. Navy	622	25	598	–	1	24	48	114	96	91	67	84	73

* The following are the Eighty Town Districts comprised in this Table (Male population in 1871 aged 5 years and upwards, 3,[illegible]) :—

London.	Cambridge.	East Stonehouse.	Wolstanton.	Lincoln.	Ashton-under-Lyne.	South Shields.
Medway.	West Ham.	Stoke Damerel.	Stoke-upon-Trent.	Radford.	Bradford.	Gateshead.
Maidstone.	Colchester.	Truro.	Wolverhampton.	Nottingham.	Hunslet.	Newcastle-upon-Tyne.
Canterbury.	Bury St. Edmunds.	Bath.	Dudley.	Derby.	Leeds.	Tynemouth.
Brighton.	Ipswich.	Bedminster.	Worcester.	Stockport.	Ecclesall Bierlow.	Carlisle.
Portsea Island.	Yarmouth.	Bristol.	Kings Norton.	Macclesfield.	Sheffield.	Merthyr Tydfil.
Alverstoke.	Norwich.	Clifton.	Birmingham.	Chester.	York.	Pembroke.
Southampton.	Kings Lynn.	Gloucester.	Aston.	Liverpool.	Soulcoates.	Holywell.
Reading.	Salisbury.	Cheltenham.	Foleshill.	West Derby.	Hull.	
Oxford.	St. Thomas.	Hereford.	Coventry.	Chorlton.	Scarborough.	
Northampton.	Exeter.	Shrewsbury.	Warwick.	Salford.	Durham.	
Bedford.	Plymouth.	Stafford.	Leicester.	Manchester.	Sunderland.	

ENGLAND.—Deaths of Males of different Occupations registered in Eighty Town Districts in the Year 1871.

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75 and upwds.
Total of Males aged 5 years and upwards	68969	10967	58062	5454	2870	3113	4237	9092	9418	9397	8514	5928	3934
I.—Professional Class.													
1.—*Persons engaged in the* General *or* Local Government *of the Country.*													
1. *National Government.*													
Civil Service	273	5	268	-	-	5	7	36	40	44	48	44	24
Government Messengers, Workmen, &c.	261	4	257	-	-	4	14	32	41	47	42	31	26
Other *Government* Officers	13	-	13	-	-	-	-	-	1	2	7	-	3
2. *Local Government.*													
Magistrate (so returned)	9	-	9	-	-	-	-	-	-	1	-	4	4
Officer of Law Court	33	1	32	-	-	1	1	3	3	6	6	7	5
Police	234	1	233	-	-	1	18	69	63	29	24	21	9
Prison Officer	23	-	23	-	-	-	-	5	6	5	5	4	1
Municipal, Parish, Union, Officer	130	-	130	-	-	-	2	13	21	28	26	19	21
Other *Local Government* Officers	2	-	2	-	-	-	-	-	-	1	1	-	-
3. *East India and Colonial Government.*													
East India and *Colonial* Service	16	-	16	-	-	-	-	-	2	1	4	3	6
2.—*Persons engaged in the* Defence *of the Country.*													
1. *Army—(at Home).*													
Army Officer (effective)	108	-	108	-	-	-	3	11	11	15	22	28	18
Army Retired and Half Pay Officer	49	-	49	-	-	-	-	2	3	8	6	9	21
Soldier	504	22	482	-	-	22	65	206	141	37	9	9	13
Militia, Volunteers	44	-	44	-	-	-	1	8	9	13	6	2	5
Army Pensioner	396	-	396	-	-	-	6	32	45	66	74	73	100
Others	4	-	4	-	-	-	-	-	-	1	2	-	1
2. *Navy—(Ashore or in Port).*													
Navy Officer (effective)	55	1	54	-	-	1	3	7	5	8	5	10	15
Navy Retired and Half Pay Officer	23	-	23	-	-	-	-	-	1	1	3	11	7
Seaman, R.N.	201	23	178	-	1	22	37	63	38	23	9	3	4
Royal Marine	73	1	72	-	-	1	5	19	21	13	5	6	2
Coastguard, Royal Naval Reserve	16	-	16	-	-	-	-	1	3	4	2	3	3
Navy Pensioner	255	-	255	-	-	-	3	24	28	42	43	51	64
3.—*Persons engaged in the* Learned Professions, *or in* Literature, Art, *and* Science *(with their immediate Subordinates).*													
1. *Clergymen, Ministers, and Church Officers.*													
Clergyman	128	-	128	-	-	-	2	5	15	17	16	41	32
Protestant Minister	56	-	56	-	-	-	2	6	4	5	16	11	12
Roman Catholic Priest	10	-	10	-	-	-	-	3	1	-	3	3	-
Missionary, Scripture Reader	16	-	16	-	-	-	-	-	4	2	5	4	1
Church, Chapel Officer	53	-	53	-	-	-	-	1	5	9	12	15	11
Others	11	3	8	-	-	3	1	2	1	1	2	-	1
2. *Lawyers, Law Court Officers, and Law Stationers.*													
Barrister	32	-	32	-	-	-	-	3	3	7	9	3	5
Solicitor, Attorney	162	-	162	-	-	-	5	16	24	22	29	36	30
Law Student	2	-	2	-	-	-	-	1	-	1	-	-	-
Law Clerk	192	7	185	-	1	6	24	53	30	36	16	17	2
Law Stationer	23	1	22	-	-	1	2	5	4	5	2	3	1
3. *Physicians, Surgeons, and Druggists.*													
Physician, Surgeon	197	1	196	-	-	1	2	23	23	33	43	29	36
Medical-Assistant, Student	20	1	19	-	-	1	7	5	2	3	1	1	-
Dentist	18	1	17	-	-	1	3	4	2	2	1	4	1
Chemist, Druggist	199	3	196	-	-	3	21	37	37	35	24	27	12
Others	3	-	3	-	-	-	-	-	-	1	-	1	1
4. *Authors and Literary Persons.*													
Author, Editor, Journalist	22	-	22	-	-	-	1	4	6	3	-	5	3
Students and *Others*	46	5	41	-	1	4	10	7	5	3	3	4	4
5. *Artists.*													
Painter, Artist	82	-	82	-	-	-	5	13	11	15	15	13	9
Sculptor	7	-	7	-	-	-	1	-	2	1	1	2	-
Engraver	84	3	81	-	-	3	3	11	14	13	12	16	6
Photographer	31	3	28	-	-	3	2	7	11	6	2	-	
Others engaged in the *Fine Arts*	2	-	2	-	-	-	-	-	1	-	1	-	-
6. *Musicians, Teachers of Music.*													
Musician, Music Master	206	4	202	-	-	4	14	50	43	27	25	28	11
Others	6	-	6	-	-	-	-	3	2	-	1	-	-

ENGLAND.—DEATHS of MALES of different OCCUPATIONS registered in EIGHTY TOWN DISTRICTS in the Year 1871—*continued*.

OCCUPATIONS.	AGES OF MALES.												
	TOTAL.	5 Years and under 20.	20 Years and upwds.	5–	10–	15–	20–	25–	[illegible]–	45–	55–	65–	75 and upwds.
7.—*cont.*													
4. Carriers on Seas and Rivers.													
Shipowner	41	-	41	-	-	-	-	-	4	11	10	10	6
Steam Navigation Service	109	1	108	-	1	-	11	26	22	17	10	8	4
Ship Steward, Cook	26	7	19	-	-	7	10	20	16	17	8	2	1
Seaman (Merchant Service)	1296	69	1216	-	3	68	158	374	243	204	128	113	104
Pilot	51	1	50	-	-	1	-	2	5	6	10	17	6
Boatman on Seas	16	2	16	-	-	2	1	1	1	2	2	6	1
Harbour, Dock Service, Labourer	589	10	579	-	-	10	31	60	134	126	105	73	37
Wharfinger	16	-	16	-	-	-	-	2	3	3	3	3	1
Others	83	4	89	-	-	4	6	13	10	11	10	8	-
5. Engaged in Storage.													
Warehouseman	261	24	237	-	-	24	37	73	72	76	48	26	11
Meter, Weigher	5	-	5	-	-	-	-	-	1	-	1	2	-
6. Messengers and Porters.													
Messenger, Porter, Errand Boy	859	75	780	-	10	65	47	120	148	135	138	119	45
Cotton Porter	67	1	66	-	-	1	3	7	13	10	11	12	3
Telegraph Company Service	33	14	19	-	1	13	10	5	2	1	1	-	-
Others engaged in *Messages*	9	-	9	-	-	-	-	-	-	2	3	3	1
IV.—AGRICULTURAL CLASS.													
8.—*Persons possessing or working the* LAND, *and engaged in growing* GRAIN, FRUITS, GRASSES, ANIMALS, *and other Products.*													
1. In Fields and Pastures.													
[illegible]	83	-	83	-	-	-	-	2	3	9	14	31	23
[illegible]	753	2	751	-	-	2	6	20	46	72	122	214	269
son, Nephew	42	25	17	8	5	13	5	9	3	-	-	-	-
[illegible]	28	-	28	-	-	-	-	-	1	4	8	6	9
[illegible]	1248	43	1205	-	4	39	43	109	96	151	214	280	308
[illegible]	20	-	20	-	-	-	-	-	2	5	1	6	1
[illegible]	17	8	9	-	-	5	3	1	3	-	1	1	1
[illegible]	30	-	30	-	-	-	-	5	4	2	6	6	3
[illegible]	4	-	4	-	-	-	-	-	1	-	-	1	1
or, Attendant	8	-	8	-	-	-	-	-	-	3	-	-	-
[illegible]	9	1	8	-	-	1	2	1	1	1	-	3	-
2. In Woods.													
Woodman	30	1	29	-	-	1	1	1	4	4	3	9	7
3. In Gardens.													
Nurseryman, Seedsman, Florist	48	2	46	-	-	2	6	5	4	6	6	9	7
Gardener	609	9	600	-	-	9	15	42	40	96	139	169	149
Others engaged in *Horticulture*	3	-	3	-	-	-	-	-	-	1	1	1	-
9.—1. *Persons engaged about Animals.*													
Horse Proprietor, Dealer	33	-	33	-	-	-	-	3	3	7	9	4	1
Horse Breaker	18	-	18	-	-	-	2	2	4	3	3	3	1
Horsekeeper, Groom, Jockey	403	11	391	-	1	10	50	56	72	63	59	46	34
Farrier, Veterinary Surgeon	93	3	90	-	-	3	5	20	13	9	20	13	7
Cattle, Sheep, Pig, Salesman	57	1	56	-	-	1	-	7	5	16	12	13	2
Drover	54	-	54	-	-	-	2	9	9	9	11	6	4
Gamekeeper	24	-	24	-	-	-	2	2	8	1	4	3	2
Vermin Destroyer	2	-	2	-	-	-	-	-	-	-	-	1	-
Fisherman	117	9	108	-	1	8	12	14	20	19	9	15	8
Others engaged about *Animals*	17	-	17	-	-	-	-	3	3	4	2	3	-
V.—INDUSTRIAL CLASS.													
10.—*Persons engaged in* ART *and* MECHANIC *Productions, in which matters of various kinds are employed in combination.*													
1. In Books.													
Bookseller, Publisher	74	4	70	-	-	4	6	9	11	9	10	17	4
Bookbinder	111	5	106	-	1	4	9	14	22	20	12	20	8
Printer	538	80	458	-	4	46	65	88	77	64	73	47	34
Newspaper Agent, News-room Keeper	44	1	43	-	1	-	1	4	6	3	7	9	2
Others engaged in *Publications*	11	-	11	-	-	-	1	1	2	2	1	2	1
2. In Musical Instruments.													
Musical Instrument Maker, Dealer	99	4	95	-	-	4	15	14	16	10	10	11	11
Others	8	1	7	-	-	1	-	1	1	3	2	-	1
3. In Prints and Pictures.													
Lithographer, Lithographic Printer	36	4	32	-	-	4	6	12	6	6	1	1	-
Others	45	2	43	-	-	2	-	4	5	10	10	6	4
4. Carving and Figures.													
Wood-carver	46	-	46	-	-	-	7	15	5	4	7	10	-
Others	39	-	39	-	-	-	1	5	4	5	4	2	1
5. In Tackle for Sports and Games.													
Toy Maker, Dealer	39	2	37	-	1	1	4	1	3	5	12	4	1
Others	13	1	12	-	-	1	-	3	-	2	1	4	1

ENGLAND.—Deaths of Males of different Occupations registered in Eighty Town Districts in the Year 1871—*continued*.

OCCUPATIONS.	AGES OF MALES.											
	Total.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65— and upwds.
11.—*cont.*												
2. *In Silk.*												
Silk, Satin, Manufacture	224	9	215	1	-	6	3	10	26	22	41	37	45
Silk Dyer, Printer	14	-	14	-	-	-	1	-	1	3	3	4	2
Silk Merchant, Dealer	16	-	16	-	-	-	2	-	-	3	4	4	3
Ribbon Manufacture	67	3	64	-	-	3	1	7	10	6	13	15	15
Others	8	1	7	-	-	1	1	1	4	1	-	-	-
3. *In Cotton and Flax.*													
Flax, Linen Manufacture	41	1	40	-	-	1	7	5	5	6	9	2	6
Lace Manufacture	106	7	99	-	1	6	11	15	11	10	19	19	15
Thread Manufacture	1	-	1	-	-	-	-	-	-	-	1	-	-
Tape Manufacture, Dealer	1	-	1	-	-	-	-	-	-	-	-	-	1
Cotton Manufacture	634	47	587	1	2	34	55	61	73	109	127	92	84
Cotton, Calico Warehouseman, Dealer	15	-	15	-	-	-	1	4	1	2	3	-	4
Fustian Manufacture	46	1	45	-	-	1	-	7	4	9	8	12	3
Calico, Cotton, Printer	71	-	71	-	-	-	6	10	4	12	11	14	14
Calico, Cotton, Dyer	47	3	44	-	-	3	4	5	6	6	14	7	1
Others	4	-	4	-	-	-	-	-	-	2	-	1	1
4. *In Mixed Materials.*													
Weaver (not otherwise described)	207	3	204	-	-	3	4	9	14	20	30	36	88
Bleacher (not otherwise described)	19	-	19	-	-	-	3	1	5	4	-	3	3
Manchester Warehouseman	28	2	26	-	-	2	3	7	12	3	3	4	2
Draper, Linen Draper, Mercer	268	20	248	-	-	20	45	42	38	41	37	25	20
Fancy Goods Manufacturer, Dealer	13	1	12	-	-	1	2	1	1	1	3	2	1
Trimming Maker, Dealer	22	1	21	-	-	1	-	3	1	5	7	3	1
Others	5	-	5	-	-	-	-	-	-	-	-	2	1
5. *In Dress.*													
[illegible]	164	5	159	-	-	5	5	25	23	23	25	20	9
[illegible]	285	7	278	-	-	7	10	23	26	45	29	45	21
[illegible]	5	-	5	-	-	-	-	1	2	1	2	1	1
[illegible]	41	3	38	-	-	2	1	6	7	2	3	3	3
[illegible]	1311	34	1277	-	2	23	35	123	197	274	267	208	150
[illegible]	19	-	19	-	-	-	-	2	3	4	4	1	1
[illegible]	14	1	13	-	-	-	1	1	2	2	2	1	1
[illegible]	210	2	208	-	-	-	2	3	15	6	12	6	4
[illegible]	45	3	41	-	-	-	2	4	3	7	2	4	4
[illegible]	15	-	15	-	-	-	-	-	2	2	2	2	1
[illegible] leather)	8	-	8	-	-	-	-	-	1	2	1	1	1
[illegible]	2002	41	1961	-	2	28	104	180	208	238	239	251	211
[illegible]	11	-	11	-	-	-	-	2	1	2	2	2	2
[illegible]	30	-	30	-	-	-	1	3	12	13	16	12	3
[illegible] Maker	33	1	32	-	-	1	3	3	5	5	6	4	5
[illegible]	36	1	34	-	-	1	3	3	6	5	5	7	4
[illegible]	48	7	41	-	-	7	3	4	9	5	7	7	6
6. *Hemp and other Fibrous Materials.*													
Mat Maker, Seller	17	-	17	-	-	-	-	3	1	5	5	2	1
Hemp Manufacture	2	-	2	-	-	-	-	-	-	2	-	-	-
Jute Manufacture	4	2	2	-	-	2	-	-	-	-	-	1	1
Rope, Cord, Maker	111	1	110	-	-	1	2	12	14	21	23	22	14
Canvas, Sailcloth, Manufacture, Dealer	6	-	6	-	-	-	-	-	-	1	3	2	-
Sacking, Sack, Bag, Maker, Dealer	12	-	12	-	-	-	-	1	-	3	5	3	2
Others	4	-	4	-	-	-	-	-	-	-	-	3	1
12.—*Persons working and dealing in* Food *and* Drinks.													
1. *In Animal Food.*													
Cowkeeper, Milkseller	232	4	227	-	-	4	9	25	21	45	40	38	45
Cheesemonger	71	2	69	-	1	1	5	14	7	19	11	4	8
Butcher, Meat Salesman	698	19	679	-	-	19	45	91	158	124	169	108	65
Provision Curer, Dealer	141	1	140	-	-	1	7	12	18	30	32	21	19
Poulterer, Game Dealer	63	1	62	-	-	1	4	6	11	9	11	11	9
Fishmonger	185	4	181	-	-	4	13	31	37	39	32	23	13
2. *In Vegetable Food.*													
Corn, Flour, Seed, Merchant, Dealer	142	2	140	-	-	2	6	22	20	26	21	21	12
Miller	119	4	115	-	-	4	6	11	20	23	18	18	15
Baker	489	13	476	-	-	15	34	79	78	93	72	68	36
Confectioner, Pastry Cook	123	9	114	-	-	9	7	17	14	23	21	15	8
Greengrocer, Fruit, Vegetable, Dealer	261	15	246	-	-	15	13	39	45	50	48	29	7
Others	12	-	12	-	-	-	-	-	2	2	4	3	1
3. *In Drinks and Stimulants.*													
Maltster	91	2	89	-	-	2	1	4	6	[illegible]	14	15	9
Brewer	343	-	343	-	-	-	17	73	73	[illegible]	61	35	23
Wine and Spirit Merchant	145	4	141	-	-	4	7	30	29	[illegible]	19	24	12
Cellarman	38	2	36	-	-	2	4	13	10	[illegible]	7	2	1
Ginger Beer, Soda Water, &c., Manufacture	37	1	36	-	-	1	1	5	6	[illegible]	5	3	1
Sugar Refiner	54	1	53	-	-	1	1	9	10	[illegible]	10	4	3
Grocer, Tea Dealer	532	30	502	-	-	30	28	91	82	[illegible]	59	46	25
Tobacco, Cigar, Snuff, Manufacturer, Tobacconist	130	9	121	-	1	8	10	21	22	[illegible]	16	12	6
Others	71	1	70	-	-	1	2	10	14	11	13	11	6

ENGLAND.—Deaths of Males of different Occupations registered in Eighty Town Districts in the Year 1871—*continued.*

OCCUPATIONS.	AGES OF MALES.												
	Total.	5 Years and under 20.	20 Years and upwds.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75 and upwards.
15.—*cont.*													
4. In Earthenware.													
Earthenware Manufacture	362	19	343	1	3	15	18	31	86	89	65	34	20
Tobacco-pipe Maker	30	1	29	-	-	1	1	2	5	7	5	5	1
Earthenware and Glass Dealer	44	-	44	-	-	-	2	2	11	7	10	9	3
Others	3	-	3	-	-	-	-	1	-	-	1	1	-
5. In Glass.													
Glass Manufacture	218	7	211	-	-	7	14	37	31	38	40	30	12
Other Workers in *Glass*	1	-	1	-	-	-	-	-	1	-	-	-	-
6. In Salt.													
Salt Manufacture	11	-	11	-	-	-	-	-	3	4	-	4	-
Other Dealers in *Salt*	3	-	3	-	-	-	-	2	1	-	-	-	-
7. In Water.													
Waterworks Service	41	3	38	-	1	2	3	4	7	5	7	7	5
Others	14	-	14	-	-	-	-	-	3	1	3	4	3
8. In Gold, Silver, and Precious Stones.													
Goldsmith, Silversmith, Jeweller	253	10	243	-	-	10	29	44	29	37	22	63	9
Plater, Plated Ware Manufacture	8	-	8	-	-	-	1	-	1	5	1	-	-
Others	45	-	45	-	-	-	4	7	6	4	9	11	4
9. In Copper.													
Copper Manufacture	10	1	9	-	-	1	1	-	3	1	1	2	1
Coppersmith	35	2	33	-	-	2	-	4	-	5	3	14	2
Others	1	-	1	-	-	-	-	-	1	-	-	-	-
10. In Tin and Quicksilver.													
Tin Manufacture	5	1	4	-	-	1	-	1	-	-	1	2	-
Tinplate Worker, Tinman	142	1	141	-	-	1	13	18	23	22	16	26	11
Tinker	3	-	3	-	-	-	-	-	-	1	1	1	-
11. In Zinc.													
Zinc Manufacture	15	2	13	-	-	2	-	2	4	4	1	1	1
12. In Lead and Antimony.													
Lead Manufacture	30	1	29	-	-	1	-	5	7	6	5	4	1
Others	8	-	8	-	-	-	-	-	3	2	1	2	-
13. In Brass and other Mixed Metals.													
Brass Manufacture, Brazier	212	13	199	-	1	12	24	34	37	40	30	21	12
Locksmith, Bellhanger	91	6	85	-	-	6	9	7	4	10	14	24	11
Gas Fitter	109	8	101	-	-	8	11	23	18	23	17	9	1
Wire Worker, Drawer	62	1	61	-	-	1	9	7	8	13	11	9	4
Others	45	-	45	-	-	-	3	6	9	10	7	7	3
14. In Iron and Steel.													
Iron Manufacture	1175	67	1108	-	9	58	126	225	211	184	157	113	25
Whitesmith	99	4	95	-	-	4	10	10	16	12	21	15	11
Blacksmith	806	39	767	-	1	38	51	141	103	123	143	109	57
Nail Manufacture	115	3	112	-	1	2	6	4	12	20	21	26	20
Anchorsmith, Chainsmith	51	-	51	-	-	-	5	5	8	14	7	8	4
Ironmonger, Hardware Dealer	139	6	133	-	-	6	13	21	14	24	20	25	9
Steel Manufacture, Worker	46	5	41	-	-	5	3	9	13	8	6	2	-
Others	18	-	18	-	-	-	-	5	5	4	2	2	-
VI.—Indefinite and Non-productive Class.													
16.—Labourers and others.—*Branch of Labour undefined.*													
1. General Labourers.													
General Labourer, Labourer (branch undefined)	6003	212	5791	-	14	198	444	934	990	1026	1630	999	357
2. Other Persons of indefinite Occupations.													
Artizan, Mechanic (branch undefined)	97	5	92	-	-	5	12	24	18	14	8	12	4
Engine Driver, Stoker (branch undefined)	150	10	140	-	-	10	13	36	29	27	20	13	1
Factory Labourer (branch undefined)	102	13	89	-	4	9	8	13	13	13	13	11	5
Shopman, Assistant (branch undefined)	9	2	7	-	-	2	3	2	-	-	1	1	-
Apprentice (branch undefined)	3	2	1	-	-	2	1	-	-	-	-	-	-
Vagrant, Gipsy	16	1	15	-	-	1	-	2	4	4	2	2	1
Others of *undefined* Occupation	2495	1148	1347	-	-	1148	259	236	160	127	179	289	149
17. 1.—*Persons of* Rank or Property *not returned under any Office or Occupation.*													
Gentleman, Independent, Annuitant	1056	5	1051	-	-	5	26	43	68	100	188	212	409
18. 1.—Scholars and Children *not engaged in any directly Productive Occupation.*													
Scholars and Children of no stated Occupation	7652	7652	-	5440	2212	-	-	-	-	-	-	-	-

Chipping Norton, 162.
Chipping Sodbury, 331.
Chorley, 481.
Chorlton, 471.
Christchurch, 101.
Church Stretton, 354.
Cirencester, 340
Cleobury Mortimer, 355.
Clifton, 330.
Clitheroe, 479.
Clun, 353.
Clutton, 325.
Cockermouth, 570.
Colchester, 204.
Congleton, 457.
Conway, 622.
Cookham, 129.
Corwen, 615.
Cosford, 213.
Coventry, 400.
Cranbrook, 60.
Crediton, 292.
Crickhowell, 601.
Cricklade, 251.
Croydon, 46.
Cuckfield, 83.

D

Darlington, 540.
Dartford, 50.
Daventry, 169.
Depwade, 239.
Derby, 445.
Devizes, 256.
Dewsbury, 502.
Docking, 244.
Dolgelly, 617.
Doncaster, 510.
Dorchester, 275.
Dorking, 43.
Dover, 72.
Downham, 247.
Driffield, 523.
Droitwich, 391.
Droxford, 110.
Dudley, 382.
Dulverton, 313 *b*.
Dunmow, 209.
Durham, 545.
Dursley, 333.

E

Easington, 546.
Easingwold, 527.
East Ashford, 63.
Eastbourne, 78.
East Grinstead, 82.
Easthampstead, 130.
East London, 17.
East Preston, 90.
East Retford, 435.
Eastry, 71.
East Stonehouse, 288.
East Ward, 573.
Ecclesall Bierlow, 507.
Edmonton, 137.
Elham, 73.
Ellesmere, 362.
Ely, 190.
Epping, 195.
Epsom, 37.
Erpingham, 231.
Eton, 149.
Evesham, 389.
Exeter, 282.

F

Falmouth, 308.
Fareham, 98.
Faringdon, 122.
Farnborough, 41.
Farnham, 40.
Faversham, 67.
Festiniog, 618.
Flegg, 229.
Foleshill, 399.
Forden, 608.
Fordingbridge, 103.
Forehoe, 235.
Freebridge Lynn, 245.
Frome, 321.
Fylde, 483.

G

Gainsborough, 434.
Garstang, 484.
Gateshead, 551.
Glanford Brigg, 433.
Glendale, 562.
Gloucester, 336.
Godstone, 45.
Goole, 512.
Gower, 585 *b*.
Grantham, 427.
Gravesend, 51.
Great Ouseburn, 492 *a*.
Greenwich, 35.
Guildford, 39.
Guiltcross, 240.
Guisbrough, 532.

H

Hackney, 11.
Hailsham, 79.
Halifax, 498.
Halstead, 207.
Haltwhistle, 556.
Hambledon, 42.
Hampstead, 8.
Hardingstone, 167.
Hartismere, 218.
Hartlepool, 541 *b*.
Hartley Wintney, 115.
Haslingden, 477.
Hastings, 76.
Hatfield, 143.
Havant, 95.
Haverfordwest, 592.
Hay, 602.
Hayfield, 451.
Headington, 157.
Helmsley, 529.
Helston, 309.
Hemel Hempstead, 146.
Hemsworth, 504 *b*.
Hendon, 135.
Henley, 155.
Henstead, 236.
Hereford, 348.
Hertford, 142.
Hexham, 555.
Highworth, 250.
Hinckley, 412.
Hitchin, 141.
Holbeach, 424.
Holbeck, 500 *c*.
Holborn, 14.
Hollingbourn, 59.
Holsworthy, 298.
Holywell, 610.
Honiton, 280.
Hoo, 53.
Horncastle, 429.
Horsham, 87.
Houghton-le-Spring, 547.
Howden, 517.
Hoxne, 219.
Huddersfield, 497.
Hull, 520.
Hungerford, 121.
Hunslet, 500 *b*.
Huntingdon, 176.

I

Ipswich, 222.
Isle of Wight, 99.
Islington, 10.

K

Keighley, 494.
Kendal, 575.
Kensington, 1.
Kettering, 172.
Keynsham, 327.
Kidderminster, 384.
Kingsbridge, 285.
Kingsclere, 119.
Kings Lynn, 246.
Kings Norton, 393.
Kingston, 47.
Kington, 603 *a*.
Knaresborough, 492 *b*.
Knighton, 604.

Selby, 513.
Settle, 488.
Sevenoaks, 56.
Shaftesbury, 268.
Shardlow, 444.
Sheffield, 508.
Sheppey, 69.
Shepton Mallet, 322.
Sherborne, 276.
Shiffnal, 357.
Shipston-on-Stour, 406.
Shoreditch, 20.
Shrewsbury, 360.
Skipton, 489.
Skirlaugh, 522.
Sleaford, 426.
Smallburgh, 230.
Solihull, 402.
Southam, 407.
Southampton, 105.
South Molton, 294.
South Shields, 550.
South Stoneham, 106.
Southwell, 441.
Spalding, 423.
Spilsby, 430.
Stafford, 367.
Staines, 132.
Stamford, 421.
Stepney, 24 *a*.
Steyning, 86.
Stockbridge, 108.
Stockport, 452.
Stockton, 541 *a*.
Stoke Damerel, 289.
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